Mergers and Acquisitions in the International Financial Services Industry

Impacts on Shareholder Wealth Creation and Operating Performance from Three Different Perspectives

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DISSERTATION

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Zusammenfassung

Diese Dissertation analysiert drei unterschiedliche Perspektiven von Fusionen und Übernahmen (im Englischen: mergers and acquisitions (M&A)), die in der internationalen Finanzdienstleistungsindustrie vollzogen wurden. Hierbei werden die verschiedenen Auswirkungen solcher Transaktionen auf die Wertgenerierung von Anteilseignern und der operativen Effizienz der beteiligten Unternehmen untersucht. Um die jeweilige Perspektive darzustellen, wurden drei voneinander unabhängige Studien verfasst, welche Unternehmen der internationalen Finanzdienstleistungsbranche als Untersuchungsgegenstände heranziehen.

Die erste Studie analysiert den geographischen Aspekt von grenzüberschreitenden M&A-Transaktionen. Hierbei werden Anteilserwerbe an notierten und nicht notierten Banken aus Entwicklungsländern durch internationale Banken aus Industrienationen mit solchen Akquisitionen verglichen, welche sich ausschließlich zwischen Banken aus Industrieländern ereigneten. Darüberhinaus untersucht die Studie besondere Ausprägungen solcher Akquisitionen sowie ökonomische und regulatorische Besonderheiten in den jeweiligen Zielländern, welche möglicherweise einen wesentlichen Einfluss auf den Erfolg der jeweiligen Übernahme haben. Übereinstimmend mit US amerikanischen und europäischen Erkenntnissen bewirken internationale M&A-Aktivitäten eine Wertgenerierung für Anteilseigner der Zielbank, wohingegen Aktionäre der Käuferbank einer Wertvernichtung ausgesetzt sind. Dieser Umstand symbolisiert somit einen Werttransfer von Industriestaaten zu Entwicklungsländern. Darüberhinaus zeigen die für Bieterbanken und fusionierte Unternehmen (im Englischen: combined entities) durchgeführten Regressionsanalysen, dass abnormale Renditen durch die internationale M&A-Erfahrung von Bieterbanken positiv beeinflusst werden. Bei Zielbanken hingegen wirken sich die Profitabilität der Zielbank sowie das regulatorische und ökonomische Umfeld positiv auf abnormale Renditen aus.

Der zweite Blickwinkel bewertet den Einfluss von M&A-Transaktionen auf Finanzdienstleistungsunternehmen durch zwei Gruppen von institutionellen Finanzinvestoren: Staatsfonds und Private Equity Fonds. Die Studie versucht zu beantworten, wie sich Zielunternehmen von Staats- und Private Equity Fonds voneinander unterscheiden, ob beide Investoren eine gleichbedeutend starke, aktive Rolle in ihren Zielunternehmen übernehmen, welche die kurzfristigen positiven, abnormalen Renditen erklären könnte und wie Wettbewerbsunternehmen der Zielunternehmen wertmäßig auf die Investitionen von Staats- und Private Equity Fonds reagieren. Hierzu wurde eine umfangreiche Stichprobe von Zielunternehmen von Staats- und Private Equity Fonds verglichen. Obwohl sich zwei Jahre nach der Akquisition keine Verbesserung der operativen Effizienz bei den Zielunternehmen eingestellt hat, bestätigen spezielle Charakteristiken der kurzfristigen Werteffekte die Fähigkeit von aktiven Mana-

gement-Monitoring durch Staats- und Private Equity Fonds. Die Analyse der dauerhaften Kursentwicklung zeigt jedoch, dass die langfristigen, abnormalen Renditen für beide institutionellen Investorengruppen keine signifikanten Werte aufweisen. Wettbewerbsunternehmen der Zielunternehmen von Staats- und Private Equity Fonds zeigen positive beziehungsweise negative Kurzfristrenditen, welche jedoch bei langfristiger Betrachtung negative Werte aufzeigen. Zusammenfassend sprechen einige Anzeichen dafür, dass Staatsfondmanager die gleiche Strategie des Anteilseigner-Aktivismus verfolgen, wie sie bei Managern von Private Equity Fonds angenommen wird.

Der dritte Betrachtungswinkel bewertet das Timing von M&A-Transaktionen innerhalb der Finanzdienstleistungsindustrie. In diesem Zusammenhang werden Transaktionen der Hochkonjunkturphase mit jenen verglichen, die in der jüngst vergangenen Finanzkrise stattgefunden haben. Die Studie untersucht die kurzfristige Wertgenerierung für Anteilseigner der kaufenden Banken sowie die Werteffekte dieser Transaktionen für Bankanteilseigner von Wettbewerbsbanken. Da die amerikanische Universalbank JPMorgan Chase & Co. (JPM) aufgrund ihrer ausgezeichneten, wirtschaftlichen Leistungsfähigkeit als Krisengewinner identifiziert wurde, werden ihre Kurzfirstrenditen mit den Renditen von anderen Universalbanken verglichen. Die Ergebnisse der Studie bestätigen teilweise die abgeleiteten Hypothesen, dass eine erfolgreiche Bank wie JPM die Möglichkeit besitzt während einer Wirtschaftskrise, Wertgenerierung für ihre Anteilseigner durch M&A-Aktivitäten zu bewirken.

Abstract

This thesis analyzes three different perspectives of mergers and acquisitions (M&A) in the international financial services industry and examines the respective impacts on shareholder wealth creation and operating performance caused by these transactions. As a result, three independent studies are performed adducting financial services industry companies as objects of investigation.

The first perspective analyze the geographical impact on cross-border M&A deals comparing ownership stakes acquisitions initiated by international banks from industrialized countries targeting (non-) listed banks in emerging market economies (EME) with those international acquisitions exclusively between industrialized countries. Moreover, the study examines, which M&A characteristics and/or economic and institutional features influence the success of cross-border M&A. Consistent with previous US and European evidence, cross-border M&A create value to target bank shareholders whereas returns to acquiring bank shareholders conjecture value destruction symbolizing a value transfer from industrialized countries to EME. The regression analyses for bidders and combined entities confirm especially the importance of bidder experience in such M&A transactions as a significant determinant of abnormal returns. Results for targets emphasize the impacts of targets' profitability and the institutional and economic environment.

The second perspective accounts for the impact of M&A deals to the financial services industry companies in conjunction with particular kinds of institutional investors, sovereign wealth funds (SWF) and private equity funds. The study tries to answer the questions how do SWF and private equity fund target firms differ from each other, whether both are playing an equally active role at their targets explaining short-term positive abnormal returns, and how do rivals in the financial services industry react on investments initiated by SWF and private equity funds. By comparing an extensive dataset of SWF and private equity targets, the institutional investors prove some potential of active monitoring although improvement in firms' operating performance two years after the engagement is not detectable. Moreover, characteristics of positive short-term valuation effects support the active monitoring potential of SWF and private equity funds. Analyzing the long-term stock performance, however, the results indicate that the long-lasting abnormal return drift to both target portfolios is not different from zero. Finally, the rivals of SWF and private equity funds show positive and negative short-term valuation effects, respectively, which are turning both into positive market reactions in the long run. Summarizing the above given arguments, some evidence is indentified that SWF managers want to pursue an activism strategy as private equity fund managers do.

The third perspective evaluates the role of timing at M&A transactions in the financial services industry in the context of a boom phase and the most recent financial crisis. The study examines short-term value generation to bank shareholders and value implications on bank shareholders according to rival banks' M&A acquisitions considering in both cases whether transactions are undertaken prior to or during the latest financial crisis. Since JPMorgan Chase & Co. is (JPM) is identified as crisis winner measured by its excellent financial performance during crisis, JPM's short-term returns are compared with the results of other US full service banks. The tested hypotheses at least partially confirm that a well-performing bank like JPM is able to benefit from the crisis creating value to its shareholders through M&A activity.

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Luisa Müller

Overview of Contents

Table of Contents

List of Figures

List of Tables

List of Abbreviations

ADIA	Abu Dhabi Investment Authority
AR	Abnormal return
AuM	Assets under Management
BHAR	Buy-and-hold abnormal return
BHR	Buy-and-hold return
bn	Billion
BofA	Bank of America
CAAR	Cumulative average abnormal return
CAGR	Compound annual growth rate
Capital	Capital One Financial Corporation
CAR	Cumulative abnormal return
CA-Ratio	Costs-Assets-Ratio
CDO	Collateralized debt obligation
CEE	Central and Eastern Europe
CIR	Cost-Income-Ratio
Citi	Citigroup
Co.	Company
cp.	compare
CUSIP	Committee on Uniform Securities Identification Procedures
e.g.	for example
EIU	Economist Intelligence Unit
EME	Emerging market economies
EMH	Efficient Market Hypothesis
EPS	Earnings per Share
EU	European Union
FASB	Financial Accounting Standards Board
Fifth Third	Fifth Third Bancorp
GDP	Gross domestic product
GIC	Government of Singapore Investment Corp
GP	General partner
HSBC	Hongkong and Shanghai Banking Corporation
i.e.	that is
IFSL	International Financial Services London
IMF	International Monetary Fund
INDG	Industry guidance

IT	Information Technology
JPM	JPMorgan Chase & Co.
LatAm	Latin America
LBO	Leveraged buyout
LP	Limited partner
m	Million
M&A	Mergers and Acquisitions
max.	Maximum
N	Number
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
PE	Private Equity
PE-Ratio	Price-Earnings-Ratio
PNC	PNC Financial Services Group
RI	Return Index
RMBS	Residential mortgage-backed securities
ROA	Return on Assets
ROAA	Return on averaged Assets
ROAE	Return on averaged Equity
ROC	Return on Capital
ROE	Return on Equity
SDC	Securities Data Company
SEC	Securities and Exchange Commission
SIC	Standard Industrial Classification
SIV	Structured investment vehicle
SPV	Special purpose vehicle
Std.dev.	Standard deviation
Sun	SunTrust Banks
SWF	Sovereign Wealth Funds
TARP	Troubled Asset Relief Program
TF	Thomson Financial
tr	Trillion
UBS	Union Bank of Switzerland
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States of America
USD	US Dollar

Var	Variable
VC	Venture capital
vs.	versus
WF	Wells Fargo

List of Symbols

α_j	Market model intercept for stock j
β_j	Market model slope for stock j
ε_{jt}	Zero-mean disturbance term for stock j at date t
$\hat{\alpha}_j$	Expected market model intercept for stock j
$\hat{\beta}_j$	Expected market model slope for stock j
R_{jt}	Returns from stock j at date t
$\hat{R}_{jt}$	Excepted returns from stock j at date t
R_{Mt}	Return of the relevant country-specific Datastream industry index at date t
AR_{jt}	Abnormal returns from stock j at date t
$CAR_{j[t_1;t_2]}$	Cumulative abnormal returns from stock j over the interval t_1 to t_2
$CAAR_{[t_1;t_2]}$	Cumulative average abnormal returns over the interval t_1 to t_2
n_j	Amount of stocks/firms in sample
SAR_{jt}	Standardized abnormal return on stock j on day t
$ASAR_t$	Average standardized abnormal return on day t
$\hat{s}_{jt}^{c}$	Corrected standard deviation of abnormal return on stock j
$\hat{s}_j$	Estimated standard deviation of abnormal return on stock j
T	Number of observations during the estimation period
T_s	Number of days in event window $[t_2 - t_1 + 1]$
R_{Mi}	Market return for the i^{th} day of the estimation period
$\overline{R_M}$	Average market return over the estimation period
$\sum$	Mathematical sum symbol
MV_{tj}	Market cap of stock j at the end of the estimation period
$\hat{s}_{jt}^{c\,2}$	Corrected variance of stock j for day t of the event period
ρ_{TarBid}	Correlation coefficient between abnormal returns of the stock of the target and the stock of the bidder during the estimation period
σ	Standard deviation
$\sqrt{}$	Square root
$\prod$	Mathematical product symbol
$BHAR_{jT}$	Buy-and-hold abnormal return of stock j on day t
BHR_{jT}	Buy-and-hold return of stock j on day t
%	Percent
AR'_{jt}	Adjusted abnormal returns from stock j at date t by median equal 0

MED_0	Median of the null hypothesis
W	Result of Wilcoxon signed rank test
r_j^+	Ranked values of Wilcoxon
$W_{n_1 n_2}$	Result of Wilcoxon rank sum test of sample n_1 and sample n_2
$r(X_j)$	Ranked values of Wilcoxon rank sum test
s_j^2	Standard error of average portfolio
F_{ij}	Independent variable of stock j, $i \epsilon \{1, \dots, n\}$
β_{ij}	Coefficient for independent variable of stock j, $i \epsilon \{1, \dots, n\}$

1 Introduction

1.1 Problem Definition and Objectives

The financial services industry is one of the most significant industries worldwide. It constitutes the foundation upon which all other economic functions and industries are built and rely on by providing the underlying mechanisms that remove nation's wealth out from under its figurative mattresses and allocate it nationwide to create growth. Moreover, financial services are the engine of wealth generation for firms and countries by pooling the factors of productivity, labor, and capital in markets that bridge the gap of risk between buyers and sellers. The most important strategic contribution of this industry is capital allocation. Efficient financial markets allocate capital to industries and companies that are assumed to use that capital to maximize risk-adjusted return, thereby maximizing national wealth. In the last decades, this industry experienced numerous changes on the economic as well as on the structural level: Reorganization and consolidation amplified the concentration within this industry significantly. Internationalization strategies have been on top of management attention as financial institutions are obliged to be networked worldwide in order to be competitive supported by financial and market-based reforms resulting in fewer restrictions on foreign ownership.

For many industry participants, mergers and acquisitions (M&A) become a common strategic response to these trends inducing a truly global competition. Consequently, the number of existing banks, for instance, has been continuously decreasing: In the Euro area[1] the number of banks dropped from approximately 8,640 in 1997 to 6,130 in 2007 (European Central Bank (2004) and (2008)). Initiators of those transactions believe that gains can be accrued through scale and scope economies, cost reduction, increased market power, and reduced earning volatility (Llewellyn (1999)). From the target view, international M&A transactions offer several potential benefits as well as including access to technology and lower costs of capital. Not only in the academic world, cross-border M&A deals and the corresponding wealth effects on shareholders are discussed extensively with positive effects to targets and negative or insignificant effects to bidders (e.g., Beitel & Schiereck (2001); Hawawini & Swary (1990); Houston & Ryngaert (1994); Madura & Wiant (1994); Siems (1996); Touran-Rad & Beek (1999)).

Moreover, the ownership structure of financial services companies is shaped by the emergence of institutional investors like pension, mutual, and buyout funds assumed to moni-

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[1] Countries participating in the Euro area: Austria, Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Finland, Portugal, Slovenia (since 2007), and Spain.

tor the management of financial services firms effectively in general. In line with this argumentation a number of studies analyzes the function of institutional investors assumed having positive impact on shareholder value creation through efficient monitoring and shareholder activism (Barclay & Holderness (1991); Holderness & Sheehan (1985); Shleifer & Vishny (1986)). They find that stock purchases of large shareholders are typically followed by abnormal stock price appreciations and also increased management turnover due to active involvement in target firms' business.

Despite of its rapid development on the whole and the appearance of various financial institutions, investors and products, the latest financial crisis originated by the burst of the US residential real estate bubble also detects serious weaknesses of the financial services industry causing bankruptcy of several major financial institutions and the strongest world economic crisis after the Great Depression. The most prominent victim linked to this crisis, for instance, is up to now the investment bank Lehman Brothers.

Taking into consideration the multifariousness of this industry, the aim of this thesis is to analyze shareholder wealth creation and operating performance of M&A activity in the international financial services industry from three different perspectives. The first perspective accounts for the geographical aspect at M&A transactions. The second factor analyzes the impact of M&A deals to financial services industry companies in conjunction with particular kinds of institutional investors. The third perspective examines the role of timing at M&A transactions. Consequently, these perspectives serve as the basis for the upcoming empirical analysis:

1. First of all, this thesis empirically analyzes the short-term wealth creation potential of M&A in the international banking industry accounting for the geographical aspects by comparing cross-border M&A activities of Western banks targeting banks in emerging market economies (EME) with international M&A activities between banks located invariably in industrialized countries. In addition to arriving at an overall judgment on the short-term wealth creation, diverse variables assumed having a decisive impact on M&A success are analyzed. Therefore, a combination of different methodological approaches including short-term event and accounting study methodologies is applied on a respective data sample.

2. Evaluating the short- and long-term wealth creation potential of M&A activities in the international financial services industry initiated by institutional investors, the investments of these blockholders are compared. As both groups of analyzed institutional investors, sovereign wealth and private equity funds, are assumed to conduct active monitoring at their targets, possible changes in operating performance are in-

vestigated. In order to give an overall evaluation of active monitoring potential, different determinants are studied providing an indication of active blockholder monitoring. With the aim of achieving a full picture of value creation through M&A transactions, short- and long-term implications on respective rival firms of target companies are analyzed. For that reason, a variation of several methodologies comprising short- and long-term event and accounting study methodological approaches is employed on base samples of institutional investor investments as well as of respective intra-industry rival companies.

3. With regard to analyze the role of timing on short-term shareholder wealth creation at M&A transactions within the financial services industry, this thesis evaluates M&A deals conducted by major US universal banks before and during the most recent financial crisis. As one specific bank is identified as one of the crisis winners, the study mainly compares its shareholder wealth creation with the one to rivals banks as well as the operating performance of the sample. Therefore, this case study applies a combination of different methodological approaches including short-term event and accounting study methodologies.

1.2 Course of Analysis

This chapter defines and explains the overall objectives of this thesis and sets the course of analysis of the following elaborations. Chapter 2 presents a number of research foundations including a definition of the financial services industry, mergers and acquisitions, and different research methodologies and approaches applied. In this context, it provides an overview of the general structure and the rapid development of the international financial services industry. Thereby, the chapter intends to create an understanding of the competitive pressures affecting the financial services industry. Moreover, the various described methodological approaches provide a description of measuring and evaluating short- and long-term shareholder wealth creation of M&A activities in the financial services industry.

Chapters 3 to 5 each represents a self-contained empirical study addressing different research questions related to the overall topic. In sum, they compose the main empirical analyses of this thesis and are developed in subsequent order. Chapter 3 examines the geographical aspect of horizontal mergers and acquisitions in the global banking industry analyzing short-term valuation effects on the capital market performance of acquiring banks from industrialized countries and target banks from EME. It tries to answer the question whether the announcement effects of cross-border M&A in emerging market economies differ from the ones occurring in industrialized countries. Moreover, after evaluating the geographic aspect in

cross-border M&A deals, the chapter presents M&A characteristics and/or economic and institutional features assumed having an influence on the success of international M&A deals. For this purpose, a global sample of 163 takeover announcements between 1994 and 2007 is identified with bidding banks from industrialized economies and targets bank from emerging market economies. By applying the market model in event-time, short-term valuation effects to target and acquiring bank shareholders are detected. After this, Chapter 3 analyzes a number of determining variables for the short-term capital market performance for bidders, targets and combined entities and test for their significance using a cross-section regression model.

Chapter 4 assesses the short- and long-term stock price impacts of large blockholder investments by sovereign wealth funds (SWF) and private equity funds on listed financial services industry companies reflecting the second analyzed aspect. By creating an overall view on the accounting figures, it answers to the question of how target firms of state and private equity funds differ from each other. Besides, this chapter addresses questions whether both institutional investors are playing an active role at their targets sustaining positive short-term returns in the long-run and what the potential determinants for the observed short-term value affects are. Moreover, Chapter 4 analyzes the short- and long-term market reactions of non-targeted rivals from the same industry according to the investments of SWF and private equity funds. Therefore, the significant positive announcement returns determined by preceding research are at first updated and validated against a global sample of 46 state fund and 68 private equity fund investments between 1990 and 2009. Then, this chapter challenges the short-term announcement returns against the long-term abnormal returns of the respective targets. By applying the market model in event-time, a comprehensive perspective on the post-merger capital market performance is created revealing whether targets are able to sustain their positive short-term abnormal returns proofing active monitoring of sovereign wealth and private equity funds. After this, Chapter 4 analyzes a number of determining variables for the short-term capital market performance and test for their significance using a cross-sectional regression model. Finally, the short- and long-term valuation effects of intra-industry rivals are analyzed demonstrating the impact on sovereign wealth and private equity fund investments on the financial services industry as a whole.

The third and final aspect of this thesis is analyzed in Chapter 5. It examines the role of timing at M&A transactions in the financial services industry in the context of a boom phase and financial crisis taking JPMorgan Chase & Co. (JPM) as an example case. The main questions addressed include whether the short-term valuation effects prior to and during financial crisis differ significantly from each other, and whether an assumed crisis winner experiences significant positive short-term announcement returns compared to its rivals. For this purpose, a sample of 72 bank mergers and acquisitions, in which US universal banks acquired

ownership stakes in other financial institutions, is identified. Using again the market model in event-time, Chapter 5 assesses the short-term post-merger wealth effects of transactions on JPM capital market performance and on respective bank peers before and during the recent financial crisis and vice versa. Moreover, the chapter focuses on comparing JPM operating performance with the respective ones of other US full service banks.

Chapter 6 consolidates the main findings from the three empirical studies and highlights the peculiarities. The study concludes with an outlook and presents potential areas for further academic research.

This thesis is relevant for researchers in the fields of banking, insurance, investment, and corporate finance as different aspects of wealth creation in the financial services industry are addressed in the course of work. Practitioners are given the opportunity to identify value-maximizing strategies for future mergers and acquisitions and key success factors for potential M&A activities are outlined.

2 Research Foundations

The following section gives a short overview of the research foundations which are connected to the main elements of this thesis: the financial services industry, mergers and acquisitions, and the measurement of M&A success. In addition by providing fundamental definition, this chapter also is determined to give a basic understanding about the currently competitive situation with in the financial services industry. Moreover, it presents methodologies and research approaches to measure and evaluate short- and long-term wealth creation through M&A transactions.

2.1 Financial Services Industry

2.1.1 Definition and Scope

The financial services industry comprises in the broadest sense all services which are linked to financial transactions. Hence, this industry includes a wide range of organizations that deal with the management of money. Among these organizations are banks, credit institutions, credit card companies, insurance companies, consumer finance companies, stock brokerages, investment funds, real estate companies, and some government sponsored enterprises (Winter, Mosena, & Roberts (2009)).

Moreover, the term "financial services" is a rather recent expression and became more common in the US partly as a consequence of the Gramm-Leach-Bliley Act also known as the Financial Services Modernization Act of 1999, which enabled commercial banks, investment banks, securities firms, and insurance companies at that time to merge (e.g., Neale, Drake, & Clark (2008)). One of the most prominent cases according to this act is the conglomerate Citigroup (Citi), which offered combined services of banking, securities and insurance to its customers originated through the merger of Citi (a commercial bank holding company) and Travelers Group (an insurance company) in 1998. This combination, announced in 1993 and finalized in 1994, violated the law unless the Gramm-Leach-Bliley Act was passed to legalize this merger and other mergers of this kind on a permanent basis (Johnston & Madura (2005)).

Industry participants comprise lenders and investors, borrowers and issuers. In order to guarantee that financial capital is directed toward desired purposes, participants interact in financial markets for securities, bonds, futures and options, employing financial intermediaries such as retail and investment banks, credit unions, investment brokers and dealers, or insurance companies, as well as "financial utilities" that provide payment, clearing, and settle-

ment procedures. With globalization, it becomes easier to participate in foreign financial institutions in order to gain access to or operate in international markets, to hedge currency risk, or to look for alternative regulatory environments (Bitz (1995)).

Ideally, transactions that occur in the financial realm must be sufficiently transparent to guarantee participants mutual benefits. In order to maintain trust and confidence in the financial services industry, supervision of the system is critical (Mwenda & Fleming (2001)). Within the private sector, the financial services industry includes credit and debt rating firms, auditing and accounting firms, and industry associations looking out for the interests of industry sub-sectors.[2] In the public sector, the industry relies upon the nation's central bank for monetary policy and banking oversight, as well as upon the department of the treasury and federal commissions regulating the financial markets and those who participate in them (e.g., the exchange supervisory authority in the US).

Since the focus of the following doctoral thesis lies in analyzing three different perspectives of M&A transactions in the international financial services industry, it applies this broad assortment of companies containing the most important advantage: The results of the three subsequent studies are comparable to other composed empirical studies on M&A transactions and their impact on shareholder wealth creation. Nonetheless, this thesis does not account for all financial services companies. Insurance and real estate companies are excluded as their business models are not comparable to banks and credit institutions making profit with lending and investing money, or stock brokerages which buy and sell shares and other securities, for instance.

2.1.2 Current Trends and Challenges

This section explains the trends and challenges impacting the financial services industry during the last decades. Its intention is to create an understanding for the competitive pressure and problems financial services firms have to cope with.

The financial services industry has experienced significant changes over the past two decades. It discovered that M&A activities are needed to be undertaken for strategically sound reasons. Changes in technology and information availability are causing alterations within the marketplace. Some sectors of this industry are being pushed toward commoditization. The quick ability of consumers to compare prices on products such as mortgages and insurance is making it more difficult for firms to compete based on differentiation. Price competition is

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[2] Respective companies for rating services are, for instance, Moody's Investor Service or Standard & Poor's and for auditing and accounting services, e.g. Deloitte or PricewaterhouseCoopers.

becoming more and more important and firms are being forced to cut costs in order to remain competitive. The introduction of electronic communication networks in form of automated stock trading networks had also an impact on competition. Traditional exchanges have been forced to shift operational methodologies. In order to remain competitive, firms must preserve connectivity, increase availability of systems, and increase the degree of security provided (Claessens, Glaessner, & Klingebiel (2000); Llewellyn (1999)).

In addition, the deregulation of restrictions on banks' ability to expand geographically was relaxed in the past. With a series of removals of restrictions on intrastate and interstate banking in the US, for instance, concluding the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, interstate branching was permitted in almost all states.[3] The removal of these constraints allowed some previously prohibited M&A to occur. Besides geographical deregulation, relaxation of what are banks allowed to do has also encouraged product diversification (Berger, DeYoung, Genay, & Udell (2000)).

The fast preceding globalization which is mainly influenced by the openness of previous socialist market economies, deregulation of geographic restrictions, and the harmonization of regulatory and supervisory environments transform individual national economies to one characterized by an interconnected web of regional economies. Particularly in the banking sector, globalization is becoming the new differentiator. The competitive advantage for global firms such as Citi, HSBC, JPM, and Deutsche Bank is that they can balance portfolio risk by taking advantage of business shifts occurring in local markets and shifting investments accordingly (Berger et al. (2000)). In order to best represent their customers, banks must have a global capability or they risk missing important opportunities of making investments globally. Another examples are western banks continuing to position themselves in China's marketplace in order to take advantage of this emerging market. Without advances in Information Technology (IT), this global shift would be impossible. The communication of data with great speed and the confidence that it is secure is a necessity in the global marketplace.

Nevertheless, the recent financial crisis reveals the extensive weaknesses of this globalized industry causing deep depressions in many economics around the globe: the collapse of large financial institutions, the bailout of banks by national governments and downturns in stock markets around the world. The origin of that crisis is attributed to the collapse of a global housing bubble, which peaked in the US in 2006, caused the values of securities tied to real estate pricing to plummet thereafter, damaging financial institutions globally. Questions regarding bank solvency, declines in credit availability, and damaged investor confidence had an impact on global stock markets, where securities suffered large losses during late 2008 and

[3] Berger, Kashyap, & Scalise (1995) provide year-by-year details on the changes in state laws.

early 2009. Economies worldwide slowed during this period as credit availability tightened and international trade declined. Critics argued that credit rating agencies and investors failed to accurately price the risk involved with mortgage-related financial products, and that governments did not adjust their regulatory practices to address 21st century financial markets (Rakshit (2008); Whalen (2008)). Governments and central banks responded with unprecedented fiscal stimulus, monetary policy expansion, and institutional bailout.

2.2 Mergers and Acquisitions

In the financial literature, the expression "Mergers and Acquisitions" has developed into a widely-used collective term representing all corporate transactions in which ownership of one company is transferred from one hand to another (Weston, Chung, & Siu (1998)). These transactions can either occur between companies of the same industry (horizontal M&A), or between companies having a buyer-seller relationship (vertical M&A), or between companies which are neither competitors nor having a buyer-seller relationship (conglomerated M&A). In the latter case, a firm or financial investor purchases stakes in a company with whose no industry relatedness exists at all (Gaughan (2002)).

Moreover, the buyer side often influences the amount of shares acquired: either a purchase of minority stakes of the target firm takes place or a change of corporate control occurs when the acquirer purchases more than 50% of target's outstanding voting rights or private equity. Jensen & Ruback (1983) describe the resulting market of majority transactions as a "market for corporate control", where managers and management teams are actively competing for their right to control corporate resources. Independent of purchasing minority or majority, M&A transactions might have an impact on corporate disposals, corporate expansions as well as on structural changes in corporate control, corporate ownership or governance of a firm (Copeland, Weston, & Shastri (2004)). As the purpose of this thesis is to measure and to evaluate shareholder wealth effects of M&A in the international financial services industry from different perspective, this study focuses on transactions with change of corporate control and the impact of blockholders purchasing minority stakes in a financial services firm.

Mergers and acquisitions with change of corporate control can be differentiated by the future legal status of the target and the degree of codetermination on the target side. In a merger, the management boards of bidder and target consent to combine the firms and jointly prepare a respective proposal to shareholders. After shareholders' agreement, the legal entity of one merging firm ceases to exist and becomes integrated in the other one. In a corporate acquisition, on the contrary, the legal status of the target usually remains unaltered. A corporate acquisition is carried out either as a share deal, in which the bidder directly talks to the

shareholders of the target to tender their shares, or as an asset deal, in which one company purchases the assets of another. While a tender offer generally evades the management of the target, no formal agreement of target's shareholders is needed. In an asset deal, on the other hand, shareholders of the acquired company have to formally approve the acquisition. Once the assets are transferred, the target firm can finally be liquidated (Damodaran (2004)).

Transactions incorporating minority stake purchases are different from the ones with change of corporate control. They take place through the respective stock market on which the target company is listed and where its shares are traded on a daily basis. As no change of corporate control occurs, consequently, target firms still exist after such transactions. Above all, bidders of minority shares are often from other industries such as pension funds, mutual funds, insurance companies, sovereign wealth funds, hedge funds, or private equity funds. These so-called institutional blockholders are not focusing on merging with or liquidating the target, they are rather interested in diversifying their portfolios attaining the highest returns on investments for their own shareholders and customers (Del Guercio & Tkac (2002)).

For the purpose of this thesis, both kinds of transactions, majority and minority, are examined. Therefore, Study 1 and Study 3 incorporate transactions where the acquirer gains more than 50% of the outstanding shares of private equity. These transactions represent the most comprehensive form of mergers and acquisitions and are expected to have the most profound impact measurable in form of respective capital market reactions (Antràs (2003)). Study 2, on the other hand, focuses on blockholder investments and their influence of targets' share price if acquirers only purchase minority stakes.

2.3 Measuring and Evaluating the Success of Mergers and Acquisitions

2.3.1 Short-Term Methodology

The event study methodology usually serves as the means for measuring short-term M&A success. It determines to what extent gains and losses of stock market returns occurring due to event information to stockholders are defined as abnormal returns, i.e. different from what is expected (Brown & Warner (1980)). New information should lead to an abnormal stock reaction at the time when the new information becomes public. Therefore, the speed and the magnitude of stock reactions are means to process information at stock markets. A systematic over- or under-reaction of returns allows rejecting the assumption that stocks represent all information and new information is absorbed by the market instantly. Hence, this approach builds on and, at the same time, challenges the Efficient Market Hypothesis (EMH), which

assumes new information to be incorporated promptly and correctly into return information (Bruner (2002); Fama (1970); Fama (1976)).

One common approach to detect expected returns lies in the two-factor capital asset pricing model, a market model assessing expected returns on the basis of a market portfolio and a risk premium (Black (1972); Lintner (1965); Sharpe (1964)). However, since the event study methodology in connection with the market model is superior as the more sophisticated approaches (Brown & Warner (1980); Dodd & Warner (1983)) and robust against ignoring autocorrelation and variance changes in daily data (Brown & Warner (1985)), this thesis uses this approach as the principal methodology for measuring short-term valuation effects of M&A.[4] Applying the standard model, direct comparability to the results of other studies from the financial services industry is ensured.

Additional to the common agreement on the applied methodology, the value creation potential in short-term event studies has also developed to a standardized position. Corporate control transactions in form of M&A are in most cases connected with significant wealth creation for the combined entity. Conversely, this creation is disproportionately allocated between the shareholders of the bidder and the target. These observations also hold true for the financial services industry. While the returns to targets experience significant positive announcement reactions (Houston & Ryngaert (1994)), the returns to bidders are either essentially zero, or even overall negative or, at most, insignificantly positive (Kane (2000); Toyne & Tripp (1998)). The described short-term market reactions show the same pattern even if no change of corporate control has taken place (Williams & Liao (2008)).

The market model event study is based upon Equation (2.1), with which returns of the stock are determined.

$$R_{jt} = \alpha_j + \beta_j R_{Mt} + \varepsilon_{jt} \tag{2.1}$$

R_{jt} and R_{Mt} represent the returns in period t of stock j and of the market M, respectively. ε_{jt} stands for the zero-mean disturbance term, which is commonly referred to as the abnormal return. An Ordinary Least Squares (OLS)-regression model for each individual stock is applied to estimate the intercept α_j and slope β_j for each stock j over a respective

[4] Other models to calculate short-term abnormal returns are the three factor model by Fama & French (1995) and the arbitrage pricing theory by Ross (1976).

estimation period. They are referred to as $\hat{\alpha}_j$ and $\widehat{ß}_j$. The doctoral thesis employs different estimation periods within the three studies: Study 1 uses an observation period of 100 trading days; Study 2 and Study 3 estimate the parameters over a period of 150 and 180 trading days, respectively. Expected returns $\hat{R}_{jt}$ are calculated as follows (Equation (2.2)):

(2.2) $$\hat{R}_{jt} = \hat{\alpha}_j + \hat{\beta}_j R_{Mt}$$

As the market return R_{Mt} within the model generally refers to a market index associated with the given securities over time, local indices are determined for each country represented in the relevant, applied data samples (Coutts, Mills, & Roberts (1994)). Using different indices for each represented country accounts for regional differences in industry-returns and country-specific risk profiles. Abnormal returns of a stock j in the event window are calculated by subtracting the expected stock return $\hat{R}_{jt}$ from the observed stock return R_{jt} in the event window described by Equation (2.3):

(2.3) $$AR_{jt} = R_{jt} - \left(\hat{\alpha}_j + \hat{\beta}_j R_{Mt}\right)$$

After obtaining the abnormal returns, the further analysis requires them to be aggregated over the event window(s) around announcement date. Cumulative abnormal returns (CAR) are calculated as defined by Equation (2.4).

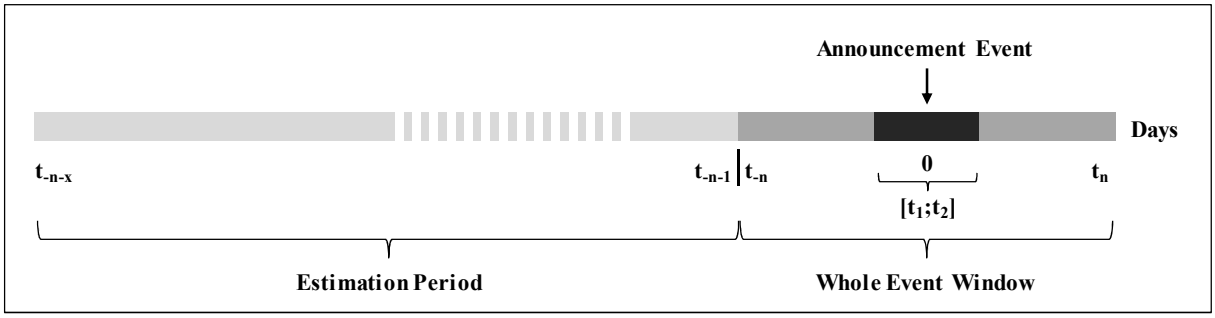
(2.4) $$CAR_{j[t_1;t_2]} = \sum_{t_1}^{t_2} AR_{jt}$$

Finally, the $CAR_{j[t_1;t_2]}$ are aggregated over the stocks and divided by n stocks to yield the cumulative average abnormal returns (CAAR) of the group (Equation (2.5)).

(2.5) $$CAAR_{[t_1;t_2]} = \frac{1}{n}\sum_{j}^{n} CAR_{j[t_1;t_2]}$$

The event window should be long enough so that all share price reactions related to the transaction announcement can be captured. On the other hand, the event window should be kept short in order not to include any confounding effects. The selected event window is 41 days: T = [-20;+20] days in Study 1 and comprises 61 days: T = [-30;+30] days in Study 2 and 3. The announcement day of a transaction is determined by $t = 0$ in all three studies. Figure 2.1 illustrates a summary overview of the event study employed.

Figure 2.1: Estimation Period and Event Window



Source: Own illustration.

In order to develop a perspective on total shareholder impact, the combined effect on an artificially combined entity is derived following the suggestion by Houston & Ryngaert (1994). To calculate the abnormal returns for the combined entity of the target and bidder, the researchers weight the abnormal returns of the bidder AR_{tBid} and the abnormal returns of the target AR_{tTar} by their market capitalizations MV as presented by Equation (2.6):

$$AR_{t,Transaction} = \frac{AR_{tBid} \cdot MV_{tBid} + AR_{tTar} \cdot MV_{tTar}}{MV_{tBid} + MV_{tTar}} \tag{2.6}$$

As market capitalizations for the entire event window, the thesis relies on those observed at the end of the respective estimation period. Thereafter, the abnormal returns for all observations are aggregated and averaged to receive CAAR (according to Equations (2.4) and (2.5)).

To test for statistical significance of the short-term returns, this thesis employs four test-statistics. The first test is the standard t-test statistic. To test the null hypothesis that the CAAR are equal to zero for a sample of n firms, the respective averages are divided by the standard deviation across the individual company returns over the square root of the number of observations in the sample as described by Equation (2.7). This test-statistic follows the

student's t-distribution for a sample below 30 observations and a normal distribution when considering a larger sample (Barber & Lyon (1996)).

(2.7) $$t = \frac{CAAR_\tau}{\sigma(CAR_\tau)/\sqrt{n}}$$

With:

$CAAR_\tau$ = Sample CAAR of sample τ

$\sigma(CAR_\tau)$= Cross-sectional sample standard deviation of CAAR of sample τ

n = Amount of stocks/firms in sample

The second employs the suggestions by Dodd & Warner (1983) examining the statistical significance of the mean standardized cumulative abnormal returns between any two dates. This test statistic is more accurate as the first one as it is adjusted to reflect cross-sectional independence (Brown & Warner (1985); Dodd & Warner (1983)). Hence, abnormal returns are less frequently disclosed supporting the EMH and leading to more reliable findings. It follows a normal distribution. Equation (2.8) describes the corresponding test-statistic z. Equation (2.8a) presents the respective standardization procedure as testing significance requires that for each stock j, the abnormal return AR_{jt} for each of the days in the event window is standardized by the square root of its estimated variance to form a standardized abnormal return SAR_{jt} and an average standardized abnormal return for each day $ASAR_t$ (Brown & Warner (1985); Patell (1976)). Afterwards, z_{t_1,t_2} tests whether the average cumulative standardized abnormal return over the interval t_1 to t_2 is equal to zero.

(2.8) $$z_{t_1,t_2} = \frac{\sqrt{n}}{\sqrt{t_2 - t_1 + 1}} \cdot \sum_{t_1}^{t_2} ASAR_t$$

(2.8a) $$SAR_{jt} = \frac{AR_{jt}}{\hat{s}_{jt}^{\,c}} \text{ and } ASAR_t = \frac{1}{n}\sum_{i=1}^{n} \frac{AR_{jt}}{\hat{s}_{jt}^{\,c}}; \text{ with}$$

$$\hat{s}_{jt}^{\,c} = \hat{s}_j \cdot \sqrt{1 + \frac{1}{T} + \frac{(R_{Mt} - \overline{R_M})^2}{\sum_{i=1}^{T}(R_{Mi} - \overline{R_M})^2}}$$

With:

SAR_{jt} = Standardized abnormal return on stock j on day t

$ASAR_t$ = Average standardized abnormal return on day t

$\hat{s}_{jt}^{c}$ = Corrected standard deviation of abnormal return on stock j

$\hat{s}_j$ = Estimated standard deviation of abnormal return on stock j

T = Number of observations during the estimation period

R_{Mi} = Market return for the i^{th} day of the estimation period

R_{Mt} = Market return for day t of the event period

$\overline{R_M}$ = Average market return over the estimation period

To test for significance for the combined entity of the target and bidder, the suggestions by Houston & Ryngaert (1994) is applied. Equation (2.8b) presents the necessary adjustment to the corrected standard deviation.

(2.8b) $$\hat{s}_{jt}^{c} = \left[\left(\frac{MV_{tTar}}{MV_{tTar}+MV_{tBid}}\right)^2 \cdot \hat{s}_{jtTar}^{c\,2} + \left(\frac{MV_{tBid}}{MV_{tTar}+MV_{tBid}}\right)^2 \cdot \hat{s}_{jtBid}^{c\,2} + 2 \cdot$$

$$MVtTarMVtTar+MVtBid \cdot MVtBidMVtTar+MVtBid \cdot \rho TarBid \cdot sjtTarc2 \cdot sjtBidc212$$

With:

MV_{tTar} = Market cap of the target at the end of the estimation period

MV_{tBid} = Market cap of the bidder at the end of the estimation period

$\hat{s}_{jtTar}^{c\,2}$ = Corrected variance of the target for day t of the event period

$\hat{s}_{jtBid}^{c\,2}$ = Corrected variance of the bidder for day t of the event period

ρ_{TarBid} = Correlation coefficient between abnormal returns of the stock of the target and the stock of the bidder during the estimation period

The third test-statistic is the cross-sectional test as proposed by Boehmer, Musumeci, & Poulsen (1991) following the student's t-distribution for a sample or sub-sample below 30 observations and a normal distribution when regarding a larger sample. This test statistic z proves whether the average abnormal return on a random day of the event period significantly differs from zero. Its core idea is to standardize the abnormal returns by the residuals' variance from the estimation period. The standardization leads to even more precise findings as the second test-statistic by Dodd & Warner (1983) as it considers the change in variance

(generally an increase) within the event period and confirms the EMH more often with abnormal returns equal zero. This test statistic described by Equation (2.9) is an enhancement of the test statistic developed by Patell (1976). Equation (2.9a) displays the respective standardization procedure to standardize abnormal returns following the suggestion of Mikkelson & Partch (1988).

(2.9) $$z = \frac{\frac{1}{n}\sum_{j=1}^{n} SAR_{jt}}{\sqrt{\frac{1}{n(n-1)}\sum_{t=1}^{N}\left(SAR_{jt} - \sum_{t=1}^{n}\frac{SAR_{jt}}{n}\right)^2}}$$

(2.9a) $$SAR_{jt} = \frac{CAR_{j,t_1-t_2}}{\hat{s}_{jt}^{\,c}}; \text{ with } \hat{s}_{jt}^{\,c} = \hat{s}_j \cdot \sqrt{T_s + \frac{T_s^2}{T} + \frac{\sum_{t=t_1}^{t_2}\left(R_{Mt} - T_s(\overline{R_M})\right)^2}{\sum_{i=1}^{T}(R_{Mi} - \overline{R_M})^2}}$$

With:

$t_1; t_2$ = First day and last day in respective event window
SAR_{jt} = Standardized abnormal return on stock j on day t
$\hat{s}_{jt}^{\,c}$ = Corrected standard deviation of abnormal return on stock j
$\hat{s}_j$ = Estimated standard deviation of abnormal return on stock j
T = Number of observations during the estimation period
T_s = Number of days in event window $[t_2 - t_1 + 1]$
R_{Mi} = Market return for the i^{th} day of the estimation period
R_{Mt} = Market return for day t of the event period
$\overline{R_M}$ = Average market return over the estimation period

The fourth test-statistic is the skewness-adjusted test-statistic suggested by N. J. Johnson (1978). The standard t-test is therefore modified to consider the skewness of distribution of abnormal returns following a normal distribution. Equation (2.10) describes the t-test. Note that $\hat{y}$ is an estimate of the coefficient of skewness and $\sqrt{n} \cdot S$ is the conventional t-statistic.

(2.10) $$t_{sa} = \sqrt{n} \cdot \left(S + \frac{1}{3}\hat{y} \cdot S^2 + \frac{1}{6n}\hat{y}\right); \text{ with}$$

$$S = \frac{CAAR_\tau}{\sigma(CAR_\tau)} \text{ and } \hat{y} = \frac{\sum_{j=1}^{n}(CAR_{j\tau} - CAAR_\tau)^3}{n \cdot \sigma(CAR_\tau)^3}$$

2.3.2 Long-Term Methodology

Detection of long-term M&A success is subordinated to a number of theoretical drawbacks deriving from analyzing longer periods, the choice of various performance benchmarks, and the applied test-statistics. As abnormal returns necessitate measurement against a benchmark, a longer time period automatically raises concerns about a possible new listing and rebalancing bias with the benchmark (Barber & Lyon (1997)). If abnormal performance is verified against the overall market, the results may be skewed, auto-correlated or exposed to heteroscedasticity. Similar to the short-term methodology, noticeable over-reaction in studies of long-term returns contradicts market efficiency (Fama (1998)).

Buy-and-hold returns (BHR) and buy-and-hold abnormal returns (BHAR) represent the most commonly-used methodology in detecting long-term performance in event-time (Barber & Lyon (1997); Brav & Gompers (1997); Loughran & Ritter (1995); Lyon, Barber, & Tsai (1999)). In order to detect the long-horizon impact of the acquisition of ownership claims, the 60-day, 120-day, 240-day, and 480-day BHR are calculated to measure the performance of the respective company portfolio. The raw BHR for each company is estimated over T days as described by Equation (2.11), where BHR_{jt} is the return of firm j on day t and T it the length of the period of interest.

(2.11) $$BHR_{jt} = \left[\prod_{t=1}^{T}(1 + R_{jt})\right] - 1$$

As described shortly above, BHR are influenced in general by the overall market performance. Consequently, BHAR are derived as the difference between the BHR using the daily closing prices and the BHR of the associated Datastream industry index. Equation (2.12) shows the calculation of BHAR with R_{Mt} as the return of the relevant country-specific Datastream industry index on day t.

(2.12) $$BHAR_{jt} = \left[\prod_{t=1}^{T}(1 + R_{jt})\right] - [\prod_{t=1}^{T}(1 + R_{Mt})],$$

The average BHR and BHAR for the total sample are calculated as an equal-weighted average. Statistical significance is tested using the two parametric tests, the standard t-test statistic and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978), as well as the non-parametric test, the Wilcoxon signed rank z-score. To test the null hypothesis that the mean BHR and BHAR are equal to zero for a sample of n firms, the respective averages are divided by the standard deviation across the individual company returns over the square root of the number of observations in the sample as described by Equation (2.13). This test-statistic follows the student's t-distribution for a sample below 30 observations and a normal distribution when considering a larger sample (Barber & Lyon (1996)).

(2.13) $$t = \frac{\overline{AR}_\tau}{\sigma(AR_\tau)/\sqrt{n}}$$

With:

$\overline{AR}_\tau$ = Sample mean of BHR or BHAR of sample τ

$\sigma(AR_\tau)$ = Cross-sectional sample standard deviation of BHR or BHAR of sample τ

n = Amount of stocks/firms in sample

The second parametric test is a modification of the standard t-statistics as already mentioned before. Barber & Lyon (1997) discover that long-term raw and abnormal returns are positively skewed and that this positive skewness leads to negatively biased t-statistics. They prove that skewness has a greater effect on the distribution of the t-statistic than does kurtosis and that positive skewness in the distribution, from which observations arise, results in the sampling distribution of t being negatively skewed. The bootstrapped skewness-adjusted t-statistic originally developed by N. J. Johnson (1978) eliminates the skewness bias presented by Equation (2.14).

(2.14) $$t_{sa} = \sqrt{n} \cdot \left(S + \frac{1}{3}\hat{y} \cdot S^2 + \frac{1}{6n}\hat{y}\right); \text{ with}$$

$$S = \frac{\overline{AR}_\tau}{\sigma(AR_\tau)} \text{ and } \hat{y} = \frac{\sum_{j=1}^{n}\left(AR_{j\tau} - \overline{AR}_\tau\right)^3}{n \cdot \sigma(AR_\tau)^3}$$

With:

$AR_{j\tau}$ = BHR or BHAR of stock j in sample τ

Finally, the Wilcoxon signed rank test examines the symmetry of a distribution around their median. This test is the non-parametric equivalent of the paired t-test. In order to compute the test, the median of the null hypothesis $MED_0 = 0$ has to be deducted from all returns (BHR and BHAR). This leads to the scores for AR'_{jt} (Equation (2.15)).

(2.15) $$AR'_{jt} = AR_{jt} - MED_0$$

Following this step the values for AR'_{jt} are ranked in accordance to their value where the highest value corresponds to the highest rank values as presented by Equation (2.16). For relatively high n, W follows the normal distribution. Equation (2.16a) describes the relevant test-statistic (Serra (2004)).

(2.16) $$W = \sum_{j=1}^{n} r_j^+$$

(2.16a) $$z = \frac{W - E(S_n)}{\sqrt{VAR(S_n)}}$$

With:

$E(S_n) = n \cdot (n+1)/4$ and

$VAR(S_n) = n \cdot (n+1) \cdot (2n+1)/24$

2.3.3 Continuative Non-Parametric Tests Applied

In this thesis, two other non-parametric tests are relevant. The first is the mean difference test with whom the statistically significant difference between two samples can be checked. The test follows a standard statistical approach and is used by several authors (e.g., Beitel (2002); Hawawini & Swary (1990); Siems (1996)). This test-statistic follows the student's t-distribution, which can be described for observations larger than 30 by the standard normal

distribution (N (0;1)). Equation (2.17) describes the t-test, whereas Equation (2.17a) demonstrates the standard error of the analyzed average portfolio.

(2.17) $$t = \frac{\overline{AV_1} - \overline{AV_2}}{\sqrt{\left(\frac{n_1 s_1^2 + n_2 s_2^2}{n_1 + n_2 - 2}\right) \cdot \left(\frac{n_1 + n_2}{n_1 n_2}\right)}}$$

With:

$\overline{AV_j}$ = Average value of CAR_j for sample j: $CAAR_{[t_1;t_2]} = \frac{1}{n}\sum_j^n CAR_{j[t_1;t_2]}$ with $j \in \{1,2\}$ or average value of other financial figures

n_j = Amount of stocks/firms in sample $j \in \{1,2\}$

s_j^2 = Standard error of average portfolio

(2.17a) $$s_j^2 = \frac{\sum_{j=1}^n (V_{ij} - \overline{AV_j})}{(n-1)}$$

With:

V_{ij} = Value of CAR or other financial figures of stock i in sample j

The other non-parametric test is the Wilcoxon rank sum test assessing whether two independent samples of observations come from the same distribution and whether they differ from each other with regards to their medians. This test is identical to performing an ordinary parametric two-sample t-test on the data after ranking over the combined samples. Equation (2.18) presents the Wilcoxon rank sum test following the normal distribution for relatively high n_1 and n_2. Equation (2.18a) presents the corresponding test-statistic.

(2.18) $$W_{n_1 n_2} = \sum_{j=1}^{n_1} r(X_j)$$

(2.18a) $$z = \frac{W_{n_1 n_2} - E(S_{n_1 n_2})}{\sqrt{VAR(S_{n_1 n_2})}}$$

With:

$E(S_{n_1 n_2}) = n_1 n_2 / 2$ and

$VAR(S_{n_1 n_2}) = n_1 n_2 (n_1 + n_2 + 1)/12$

2.3.4 Evaluation of Mergers and Acquisitions' Success

Most event studies are followed by a regression analysis after abnormal returns and the statistical tests were calculated. The aim of such an analysis is to designate the influence of certain determinants such as firm characteristics or the transaction occurred at a specific time or being cross-border. Regression models are often used in financial analysis in terms of estimating and explaining stock returns. For this purpose, linear regression models with cumulative abnormal returns as dependents are used (Sefcik & Thompson (1986)). Linear regression models are able to cope with a great number of different independent variables and might look as described by Equation (2.19).

(2.19) $$CAR_{j[t_1;t_2]} = \alpha_0 + \sum_{i=1}^{n} \beta_{ij} \cdot F_{ij} + \varepsilon_j$$

With:

α_0 = Regression intercept (constant)
F_{ij} = Independent variable of stock j, $i \in \{1, \dots, n\}$
β_{ij} = Coefficient for independent variable of stock j, $i \in \{1, \dots, n\}$
n = Number of independent variables
ε_j = Residual of regression function for stock j

All conducted regressions are OLS-regressions assuming a linear relationship between the dependent and the independent variables. This method requires the residuals to be independent and normally distributed, to have the same variance (not heteroscedastic), not to be correlated and there should not be any linear relationship between the regressors. Therefore, regressions are controlled for autocorrelation using the Durbin-Watson statistic, multicollinearity using variance inflation factors and tolerance for individual variables, heterosce-

dasticity using the White test. In order to eliminate the effects of outliers and to prevent biased results, variables are excluded from regressions if their individual value is not within the tolerance of the triple standard deviation of the respective sample.

The regression method enables to integrate qualitative information using the dummy variable technique. Dummy variable are binary coded with either 0 or 1. For the above regression function, the F_{ij} would take the value of one, if an assumed certain influence (e.g., deal- or firm-specific) factor is present. The more important attribute of dummy variables is that they can be used like any metric variable. Hence, it is possible to include nominal scaled information in regression analysis. This condition is only true for independent, but not for dependent variables.

2.3.5 Overview on Research Approaches

Adjacent to presenting the different research methodologies in determining and evaluating the success of mergers and acquisitions, the variety of available research approaches also contributes to the complexity of short- and long-term M&A analysis. Bruner (2002) portrays four main research approaches for pronouncing a judgment on M&A success and profitability; event, accounting, case, and executive studies. Since an assessment of M&A success and shareholder wealth creation needs the application of different research approaches, this thesis employs different approaches as it claims to provide a comprehensive view on the international financial services industry according to the three examined aspects. This section, therefore, provides an overview of the most frequently utilized research approaches within the field.

Event studies represent the most commonly applied research approach that dominates the field since the 1970s. Event studies build on share return information and observe abnormal returns to shareholder around or after the announcement of a specific deal or event. As already presented in the previous section of this chapter, they either analyze short-term or long-term M&A success. Abnormal returns are detected by matching up the returns of a bidder or target to a benchmark return. Expected returns are determined by the market model in short-term event studies or the benchmark returns of matching market index in long-term event studies. Moreover, event studies built on EMH and are forward looking assuming that stock prices reflect the present value of expected future cash flows to shareholders (Bruner (2002)). Even if short-term event studies are assumed to assess future cash flow, they are exposed to danger that some information is not correctly factored into share prices. Moreover, they are very sensitive to the event and the estimation periods selected: Abnormal returns are usually diminished in larger event-windows, but larger estimation periods are likely biased by other events occurred (Eberhart, Maxwell, & Siddique (2004)). The results attained in long-

term event studies, on the other hand, are often dependent on the applied methodology and benchmark chosen. As described earlier, long-term event studies need a comprehensive methodology to overcome inherent statistical biases.

Accounting studies represent the second research approach commonly applied in assessing shareholder wealth creation through mergers and acquisitions. These studies examine reported financial results and answer the question whether acquirers outperform their non-acquired peers. Since focusing on general balance sheet structure or performance indicators, accounting studies are backward-looking and build on accredited published accounting data. While published data carries credibility to the reader, a general comparability of financial data across various year and reporting standards does not always apply (Bruner (2002)).

Therefore, case studies as the third complementary approach are performed to overcome the limitations intrinsic in the two explained research approaches. By focusing on a single company conducting transactions or a single transaction, case studies alleviate a more detailed analysis of transaction phenomena compared to event or accounting studies. Most of the time, case studies pursue a structured approach bringing on new insight from a detailed description of real transactions and evaluation of the performance along a number of predefined criteria that can be either quantitative or qualitative in nature (Eisenhardt (1989)).

Executive surveys reflect the last research approach presented by Bruner (2002). From a limited number of executive questionnaires, general conclusions are drawn. Although the respective studies are usually based on standardized questionnaires, a similar sampling bias applies as present in executive interviews (Kaplan, Mitchell, & Wruck (1997)). This thesis, however, desists from employing this last research approach. Instead, the following chapters focus on providing a detailed overview of the shareholder wealth creation through M&A in the international financial services industry using a mix of event, accounting and case study approaches.

3 Study 1: Cross-Border Bank M&A in Emerging Market Economies

3.1 Introduction

The global financial services industry experienced tremendous changes in the past. Due to an intensive period of reorganization and consolidation, the concentration of banks in advanced economies has amplified significantly. The number of banks in the Euro area,[5] for instance, fell over the period 1997 to 2007 from approximately 8,640 to 6,130 banks reflecting a reduction of 29% (European Central Bank (2004) and (2008)). This decrease resulted in a strong competition in home markets, which intensified pressure on major international banks to find new areas for growth. Therefore, financial institutions often sought for profit opportunities at the customer and product level by starting their financial engagements abroad through cross-border M&A activities. Initiators of those transactions believe that gains can accrue through scale and scope economies, cost reduction, increased market power, and reduced earning volatility (Llewellyn (1999)). From the target view, cross-border M&A deals offer several potential benefits as well as including access to technology and lower costs of capital. Consequently, these transactions are regarded as strategic responses to a changing and globalizing environment underlined by respective numbers: The deal volume of cross-border M&A in the financial services industry augmented to nearly USD 842 bn in 2007 coming from USD 51 bn in 1994.[6]

Besides strategic considerations, the internationalization of the banking industry has also been enforced by financial and market-based reforms in many EME resulting in fewer restrictions on foreign ownership. The collapse of the communist regimes in countries of Central and Eastern Europe (CEE), for example, led to the opening of these markets and offered new opportunities for banks from industrialized countries. The liberalization of capital account and financial deregulation, hence, caused a wave of cross-border bank M&A involving acquisitions of ownership stakes at target banks located in EME by large (international) banks from industrialized countries. As a result, in a number of countries in CEE and Latin America (LatAm), foreign banks now account for a major share of total banking assets. In emerging Asia, a similar pattern becomes apparent even if the share of foreign banks is overall much lower.

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[5] Countries participating in the Euro area: Austria, Belgium, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Finland, Portugal, Slovenia (since 2007), and Spain.

[6] Figure 3.1 gives an overview on the deal volume evolution of cross-border M&A in the financial services industry.

The academic world discusses cross-border bank M&A deals and the corresponding wealth effects on shareholders extensively. However, empirical studies predominately examine the valuation impacts between bidders and targets both located in industrialized countries. Here, target banks report significantly positive wealth effects (e.g., Beitel & Schiereck (2001); Houston & Ryngaert (1994)), whereas the valuation effects for bidding banks, are either non-existent or negative (e.g., Madura & Wiant (1994); Siems (1996); Tourani-Rad & Beek (1999)). The combined effect of targets and bidders and thus on whether bank M&A deals are creating value on a net and aggregate basis is positive in both US and European studies (Cybo-Ottone & Murgia (2000); Hawawini & Swary (1990)). Since financial markets in the US and Europe are highly transparent, a bulk of information about targets is available leading to a contest among bidders. As a result, the positive value effects to targets are often attributable to the resulting takeover premium necessarily paid by bidders experiencing consequently negative valuation effects due to the market's perception that the transaction is not in the best economic interest of the bank (Pilloff & Santomero (1998)). These wealth effects are assumed to be different at transactions occurring in EME as their financial markets are less transparent and less developed. However, empirical studies focusing on cross-border bank M&A transactions from industrial countries to EME are rather limited. Kiymaz (2004) and Waheed & Mathur (1995), for instance, find that acquisitions in developing countries are more favorable for bidders than acquisitions in developed countries. Williams & Liao (2008), on the contrary, found out that announcements are associated with negative abnormal returns for acquirers but positive abnormal returns for target banks.

The rationale behind this study, hence, is the geographical comparison of shareholder wealth creation through cross-border bank M&A transactions. Since information on potential targets in EME is difficult to access and therefore, the realistic values of targets are challenging to estimate correctly, it is assumed that the valuation effects in cross-border M&A deals in developing countries are different from the ones in industrialized countries. In particular, the following research questions should be answered: (1) Do announcement returns differ between cross-border M&A occurring only among industrialized countries and cross-border M&A initiated by Western banks targeting banks in EME? (2) Which characteristics of bidders, targets, and emerging market countries affect cross-border M&A transactions?, and (3) How do these characteristics differ from the ones identified by studies examining international bank M&A deals between industrialized countries?

For this purpose, this study identifies 163 M&A transactions with change of corporate control between 1994 and 2007 involving listed bidder banks from Western Europe and North America and (non-) listed target banks from Asia, CEE, and LatAm. By applying the event study methodology, the analysis firstly measures the announcement effects of transac-

tions for bidding banks analyzing stake purchases of listed and non-listed target banks. The results indicate that cross-border M&A in EME do not yield significant abnormal returns for bidders on average neither negative nor positive similar to previous research results on cross-border M&A. Some sub-samples of bidder banks, however, presume wealth creation to shareholders contradicting previous studies. Afterwards, several value drivers of M&A success for bidder banks are tested indicating strong evidence that successful M&A deals are primarily dependent on bidder M&A experience, purchase of non-listed, larger target banks, and low GDP growth in EME, which are different from the one identified by previous studies. In a second step, the data sample is limited to those transactions in which both targets and bidders are listed on the stock exchange getting an insight of the influences of public targets on the respective bidders. The study discovers significantly positive abnormal returns for target bank shareholders whereas returns to acquiring bank shareholders and combined entities are significantly negative. The results to bidders and targets support the ones of previous analyses whereas the negative abnormal returns of combined entities do not support the assumption that international bank M&A deals generate wealth on a net and aggregate basis. Running regressions of the sub-sample, the returns to bidders are influenced positively by bidder M&A experience, larger asset size of targets, less liberalized economies with poor governance. Concerning target banks, the impact of institutional and economic environment as well as target bank profitability and smaller asset size are significant determinates of their abnormal returns similar to previous empirical results. The returns to combined entities are only affected positively by bidder M&A experience.

The study is organized as follows: In the literature section, the study describes potentials for wealth creation in EME with their related risk. Moreover, it presents an overview of the previous event studies analyzing bank M&A activities. In section 3.3, the different value drivers are defined explaining cross-border M&A success. The next section describes the applied methodology and explains the data construction of the data sample. In the penultimate section, two sets of results are displayed: firstly, the event study results and regression analysis of all 163 transactions and secondly, the event study results and regression analysis of listed bidder and listed target banks. The study is summarized in section 3.6.

3.2 Literature review

3.2.1 Wealth Creation in EME through Cross-Border M&A Deals and its Related Risks

Wealth creation in EME is assumed to be different from value creation in developed countries as the respective economies and capital markets present great disparities in the level of their development; for example, in EME, economic growth measured by gross domestic product (GDP) is in general much higher compared to industrialized countries.[7] Hence, transactions in which developed market firms target firms in emerging markets are supposed to have specific advantages compared to cross-border M&A deals between firms both from developed countries. Claessens, Demirgüç-Kunt, & Huizinga (2001), for instance, prove in their study that foreign owned banks created through cross-border M&A tend to outperform domestic banks whereas, according to Berger et al. (2000), cross-border M&A deals between developed countries create institutions that cannot compete successfully in their host markets.

In their work, Chari, Ouimet, & Tesar (2004) highlight bargaining power and information asymmetry as advantages for cross-border M&A deals in emerging countries. Bidding firms may benefit from having better bargaining power if fewer bidders compete for the target, the target has liquidity needs or changes in government rules support foreign acquisitions. In a period of crises, when beliefs in future earnings are unreasonably rejected, bargaining power is even stronger causing elevated gains for the acquirer. Additionally, in emerging markets target firms are often uncertain about their true standalone value and subsequently undervalue their assets; especially, if there is no functioning capital market at all. The acquirers, however, are often better in evaluating the synergies from the merger and execute only those deals, which reflect significant gains for them. This information asymmetry may result in underpaying for the stakes in the target firm. Combined with crises, the acquirer realizes even higher gains because the beliefs about future payoffs of the target firm collapse being replaced by irrational ones.

Furthermore, acquisitions of targets from the financial service industry in emerging markets may offer great opportunities due to the lack of a developed banking system reflecting greater potential for market growth. By comparing, for instance, the ratio of bank assets to GDP of CEE countries to the same ratio of Western European countries, the market growth potential becomes obvious: In 2002, the ratio of bank assets to GDP in CEE was at 68% whereas for Western Europe, it augmented to 270%. This gap in banking intermediation symbo-

[7] The GDP growth in the EU 15 countries was at 2.6% for 2007 whereas the respective growth for China was at 11.1% (http://epp.eurostat.ec.europa.eu; http://www.chinability.com/GDP.htm.).

lizes the strong potential for growth in the financial sector.[8] In addition, banks from developed countries tend to have competitive advantages over local banks reflected by greater expertise, better IT infrastructure and superior managerial and financial resources (Tschoegl (2004)).

Differences in legal protection and accounting standards may also influence the value creation in emerging markets positively compared to developed countries. Bris & Cabolis (2008) analyze mergers, in which the bidder wants to buy a 100% stake[9], that the greater the difference in shareholder protection and accounting standards between the target and bidder countries, the higher the premium the acquirer must pay to the existing shareholders of the target bank. This higher premium is an outcome from target shareholders' perception expecting a positive valuation effect from the improvement in shareholder protection occurred through the change in nationality. Regardless of this higher premium, the volume of cross-border M&A is higher the greater the difference in investor protection between the target and bidder countries (Rossi & Volpin (2004)).

In spite of the mentioned advantages, there exists a number of downside risks to face if expanding one bank's business and operations into foreign financial systems in general and into emerging financial markets in particular. Firstly, political, legal (regulatory and supervisory), cultural, linguistic, and social differences, which are mostly greater in emerging markets, reflect efficiency barriers and risks to the operations of the corporation generated through cross-border M&A transactions. Hence, some of the gains achieved through cross-border consolidation are offset. Moreover, these transactions create larger, more complex institutions that overstrain the management skills resulting in communication and operational faults amplified by geographical distance. This risk is even intensified where the courses of business diverge significantly between the domestic and foreign operations (Berger, Young, & Udell (2001)). Finally, the business environment can be more uncertain in emerging markets. Several examples are possible: (i) financial systems are illiquid and key financial products used by developed banks to manage their risks are not available, (ii) macroeconomic cycles are usually more pronounced, (iii) regulatory structures are often more negligent, and (iv) weaker legal framework, particularly in the area of property rights.

Nevertheless, the analysis assumes that cross-border bank M&A transactions in EME provide advantages to bidders resulting in positive, abnormal market reactions as the benefits

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[8] Data retrieved from Economist Intelligence Unit (EIU); CEE countries include Czech Republic, Hungary, Estonia, Latvia, Lithuania, Poland, Slovakia, Slovenia, Bulgaria, Romania, Croatia plus Turkey.

[9] The target becomes a national of the acquirer's country when the bidder acquires 100% of the target firm. This change in nationality involves a change in investor protection and accounting standards to which the target firm must comply.

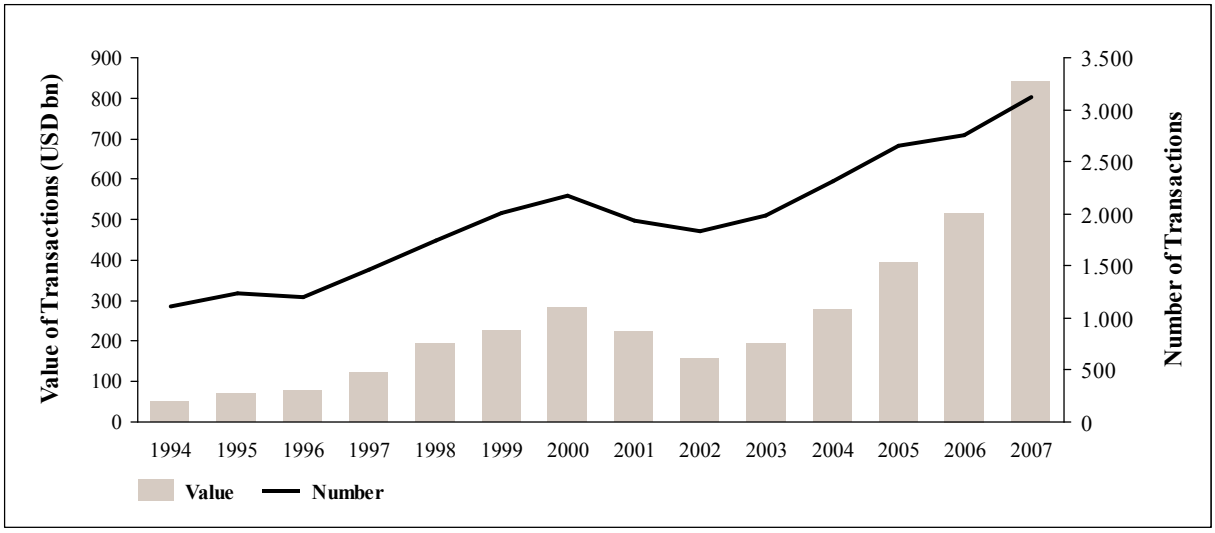
outweigh the risks. Given the fact that these advantages do not prevail in developed economies, the returns to acquiring banks resulting from M&A deals are negative.

3.2.2 Status Quo of Empirical Research

Pronouncing a judgment whether the described benefits of cross-border bank M&A transactions in EME are actually put into effect and therefore, the investments are paid off is complex. Empirical analysis could help measure this question. As the analysis focuses on the value implications of cross-border bank M&A deals and their respective drivers, the status quo of the empirical research is limited to event study representing the only methodology, which directly allows determining the impact of these transactions on wealth creation or destruction to shareholders.

Despite of the increasing number of cross-border bank M&A transactions in the past reflected by a compound annual growth rate (CAGR) of 8.22% (1,115 transactions in 1994 compared to 3,115 transactions in 2007) and presented by Figure 3.1, the overwhelming majority of empirical studies concentrates on banking acquisitions within the United States.

Figure 3.1: Cross-Border M&A Transactions in the Financial Services Industry



Source: Own illustration; UNCTAD M&A Database (www.stats.unctad.org).

Most of these studies analyzing the wealth effects of M&A transactions to both the target and the bidding banks report significantly positive wealth gains for the target banks (e.g., Brewer, Jackson, Jagtiani, & Nguyen (2000); Hannan & Wolken (1989); Hawawini & Swary (1990); Houston & Ryngaert (1994); Hudgins & Seifert (1996)). The wealth effects for bidders, however, have generally varied between non-existent and negative (e.g., L. Allen & Cebenoyan (1991); Cyree & DeGennaro (2002); Kane (2000); Madura & Wiant (1994);

Siems (1996); Subrahmanyam, Rangan, & Rosenstein (1997); Toyne & Tripp (1998)).[10] Some other studies analyze the effects of cross-border mergers for US banks confirming the findings regarding the wealth creation of domestic bank M&A activity (e.g., Cornett, Hovakimian, Palia, & Tehranian (2003); DeLong (2001)).

Even though the research on M&A in European banking has been growing considerably in recent years, the number of studies with a European focus on cross-border bank mergers is still limited. Tourani-Rad & Beek (1999), for instance, analyze European bank M&A deals observing no significant abnormal returns for bidding bank shareholders while abnormal returns for target bank shareholders are significantly positive. However, they do not find a significant difference in cross-border activity compared to domestic transactions. Analyzing M&A deals involving different firms in the European Union, Campa & Hernando (2004) discover that bidder and target firms acting in the financial industry receive significantly lower abnormal returns at cross-border transactions. They point out that in a regulated industry such as the financial services industry mergers generate lower value than M&A announcements in unregulated industries. This low value creation in regulated industries becomes significantly negative when the mergers involve two firms from different countries.

Studies focusing on cross-border bank M&A in EME are even less frequently. This lack in financial research is surprising, especially bearing in mind the specific, described advantages for developed country firms targeting firms in emerging markets. Only a few papers outline the difference of bidder and target countries and analyze acquisitions in EME as potentials for value creation through cross-border mergers. Waheed & Mathur (1995), for instance, investigate the impact of international expansion on shareholder value of US banks showing that announcements of foreign expansions result in significant abnormal returns for US bank shareholders. Moreover, they are significantly negative when banks announce expansion into developed countries and significantly positive when announcements relate to risky developing countries. This value creation comes from diversification benefits combined with the advantages of lower competition in developing countries compensating for the political risk prevailing in emerging countries. Williams & Liao (2008), on the other hand, observe that acquisitions of stakes in banks, both minority and majority purchases, demonstrate value destruction to shareholders of bidding banks whereas target bank shareholders benefit from the transactions. This supports the results of previous M&A deals occurring between developed countries. Moreover, they identify M&A characteristics and economic features influencing abnormal returns of these transactions.

[10] For a comprehensive overview of the large number of empirical studies covering the US market cp. Beitel & Schiereck (2001) and Pilloff & Santomero (1998).

Given the increased M&A activities in emerging countries, especially regarding the financial services and banking industry and the supposed differences between transactions in developed countries and deals initiated by industrialized countries targeting emerging countries, research focusing on this topic is of important interest. Concentrating on transactions with change of corporate control and accounting for both listed and non-listed targets, this study intends to detect the differences in wealth creation to shareholders between studies accounting only for deals in developed countries and transactions accounting for both developed and emerging countries. Finally, different value drivers are investigated which might determinate abnormal returns and success of M&A transactions in EME providing guidance for a successful market entry in those regions.

3.3 Value Drivers Explaining Cross-Border Bank M&A Success in EME

From prior research, 14 variables with explanatory power are identified that are tested with regards to their impact on cross-border M&A success in EME and compared to regression results from previous research (e.g., Beitel, Schiereck, & Wahrenburg (2004). These variables are classified into five categories presented in the following and summarized by Table 3.1.

1. Profitability and Cost Efficiency: There are two hypotheses explaining profitability and cost efficiency gains which are empirically tested by Akhavein, Berger, & Humphrey (1997). The relative efficiency hypothesis declares that acquirers may be able to realize (profit and cost) efficiency gains by transferring their superior management skills to the target assets. After the transaction, the more efficient acquirer ameliorates the efficiency of the target by spreading its superior managerial expertise and policies up to its own level (Berger et al. (2000)). The low efficiency hypothesis, on the other hand, states that the management of the target takes the merger as a pretense executing extensive restructuring, profitability and cost efficiency improvements to increase the profitability of both parts of the combined entity. Hence, post-merger improvements are realizable if the transaction involves a poorly performing target. Both hypotheses are confirmed by findings of several researches. Hawawini & Swary (1990) as well as Pilloff & Santomero (1998), for instance, prove the efficiency hypothesis by finding that mergers create more value for bidders and targets when the difference in efficiency between the two is larger. According to Houston & Ryngaert (1994) and Madura & Wiant (1994), higher efficiency of the target has a negative impact on value creation (low efficiency hypothesis). The study expects that low profitability and cost efficiency of the target and a larger difference in profitability and cost efficiency between bidder and target affect the success of transactions significantly compared to previous studies analyzing only bidders and targets from industrialized economies. The profitability of the target and the bidder is measured using the *Return on average Equity (ROAE)*. As a relative profitability measure, the

relation of the target average return on equity to the bidder ROAE is used. Moreover, cost efficiency is measured by two variables: the *Cost-Income-Ratio (CIR)* and the *Costs-Assets-Ratio (CA-Ratio)*. Comparing the cost structure of the target in relation to the cost structure of the bidder the study also accounts for the relative CIR and the relative CA-Ratio. Since all these variables only base on accounting figures, it is supposed that target country-specific factors outweigh these measures.

2. Asset Size: As discovered by empirical studies, the asset size of a target in relation to the asset size of a bidder has an impact on the M&A success. Although the acquisition of smaller targets is less complex, the study expects that the acquisition of larger targets is value creating as economies of scale may be significant and the larger the target banks the larger possible synergy gains may be. Therefore, acquisitions of targets incorporating sufficient synergies but are of a manageable size should have a positive impact on value creation. Moreover, as often inefficient internal structures of targets in EME offer the possibilities of synergy realization, it is assumed that even acquisitions of larger targets create values contradicting previous studies. Hawawini & Swary (1990), for example, discover that M&A transactions are more favorable for bidders if targets are small relative to the bidders. Additionally, they prove that smaller bidders tend to be more successful than larger bidders are. Zollo & Leshchinkskii (2000) also find that larger size of the acquirer has a significantly negative impact on the acquirer's M&A success. The relative *Asset Size* is measured by using the relation of the target total assets to the bidder total assets.

3. Deal-specific Factor: Taking into account the deal-specific factor, the empirical analysis examines whether a target bank is listed or non-listed on the stock exchange. In many emerging countries, bank shares were not traded publicly as the privatization process concerning firms and banks did not start until the early nineties of the last century. This fact is underlined by the data sample as in only 22% of all transactions, target banks[11] are publicly traded at the time of the deal announcement. Since public targets due to the market requirements of premium payments are more expensive than non-listed targets and in EME, a lot of noise prevails at target capital markets, it is expected that listed targets are value diminishing. This deal-specific factor is quantified with a dummy variable equaling 1 for listed targets and 0 otherwise.[12]

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[11] Although 52 listed target banks (approx. 32% of entire data sample) are identified, the data regarding individual equities for these banks were not available or the banks experienced only thin trading. To ensure comparability between the regressions of section 3.5.2 and the regressions of 3.5.4, only 36 target banks are considered.

[12] This variable is not necessary when the study regresses for the M&A success of target banks as they are all publicly traded.

4. Bidder Experience: Empirical studies prove a positive relation between bidder experience and abnormal returns from M&A transactions. DeYoung (1997), for instance, finds concentrated efficiency gains in mergers where bidder banks accomplish frequent acquisitions suggesting positive effects of bidder experience. Zollo & Leshchinkskii (2000) also expose a significantly positive correlation between codification of experience related to M&A deals and bidder CAR. Beitel et al. (2004), conversely, discover that experience does not have any influence on M&A success measuring the experience of a bidder bank by the frequency of its conducted M&A transactions. Following former findings, the study assumed that more experienced bidders have learned how to perform value-creating M&A transactions generating higher synergies and resulting in higher returns for bidders and targets. To measure the *Bidder Bank Experience*, the study examines the M&A frequency of cross-border deals using a dummy variable. It considers a bidder as experienced if it has successfully conducted at least three cross-border transactions within the period between 1994 and 2007 prior to a transaction analyzed. The experience of a bidder bank in a foreign country may also be measured by its previous involvement. Since in the early stage of privatization, emerging countries restricted foreign direct investments and only allowed foreigners to acquirer minority stakes in local firms. The data sample shows that about 20% of bidder banks already held a minority stake in the banks they took control over. Therefore, such acquiring banks are not only involved in the specific country but already have inside knowledge of the specific target. This inside knowledge about the target bank and its financial situation, in addition, permit the bidder bank to assess the target in a correct manner preventing from overpaying. Kaufman (1988), for example, discovers that bidder with prior ownership stakes in the target firm pay a smaller premium by acquiring an additional stake. Moreover, previous research analyzes that gaining majority control over a target firm in an emerging country is the key to successful investment (Chari et al. (2004)). The market rewards banks attaining majority control to turn around an underperforming minority investment. According to the described arguments, it is expected that holding a minority stake in the target prior to the final transaction and thus having a specific experience in the target country and bank influence the success of transactions positively.

5. Target Country-Specific Factors: At last, target country-specific factors may influence the success of M&A transactions. As already stated in the literature review, some studies state that acquisitions in developing countries create more value compared to acquisitions in developed countries. The degree of target-country development is determined by *Economic Freedom* and annual *GDP Growth*. Moreover, the study qualifies the institutional and environmental conditions in the target bank home country by the rule of law and the annual inflation change. Proved by empirical results, regulation of a local market has a significant impact on bank mergers (Buch & DeLong (2004)). In EME, target banks were previously under gov-

ernment regulation. Therefore, the degree of market deregulation can be used as a proxy for the degree of economic development. It is supposed that a high degree of regulation will have especially a positive influence on bidder CAR and negative influence on target CAR. In order to measure the regulation of the respective economy in the target countries the study employs the index of economic freedom published by the Heritage Foundation (2009). Williams & Liao (2008) find out that target returns on cross-border M&A deals are higher in countries with poorer governance. Both target and bidders might be compensated for relatively poor governance and legal protection via a risk premium. Following this argument, it is assumed that a low degree of governance will have a positive impact on shareholder CAR. In emerging markets, furthermore, the prospect of future growth indicates the pace of development of a country measured in annual GDP growth rates. Kiymaz (2004), for instance, utilizes target country GDP growth to explain abnormal returns analyzing the impact of macroeconomic factors associated with cross-border acquisitions. His study proves that a higher GDP growth in the target market is negatively related to wealth gains by bidders and positively related to target wealth gains, respectively, because favorable economic conditions force bidders to pay higher premium and/or bidders become over-optimistic about the potential benefits. This study follows this line of argumentation. The *Rule of Law*, in addition, captures the success of a society in developing an environment in which fair and predictable rules form the basis for economic and social interactions. It is an indicator of governance with higher values corresponding to better governance and quantified by using the data provided by Kaufmann, Kraay, & Mastruzzi (2008). Finally, the *Change in Inflation Rate* is an indicator of the stance of the domestic monetary policy in the respective emerging countries. Therefore, it is presumed that high abnormal returns are associated with a strong record for macro-economic management measured by a low inflation growth rate. The data is derived from the World Economic Outlook database.

Table 3.1: Definition of Independent Variables

	Description	*Definition*
		Profitability and Cost Efficiency[a]
Var1:	Target ROAE	Return on average equity of the target
Var2:	Target CIR	Cost-Income-Ratio of the target
Var3:	Target CA-Ratio	Total operating costs divided by total assets of the target
		Relative Profitability and Cost Efficiency(target/bidder)[a]
Var4:	Relative ROAE	ROAE of target divided by ROAE of bidder
Var5:	Relative CIR	CIR of target divided by CIR of bidder
Var6:	Relative CA-Ratio	Total operating costs/total assets of the bank divided by total operating costs/total assets of the bidder
		Relative asset size[a]
Var7:	Relative asset size	Logarithm of total assets of the target divided by the logarithm of total assets of the bidder
		Deal-specific factor
Var8:	Dummy of listed target	Binary dummy variable: 1 for listed target, 0 for non-listed target
		Bidder experience
Var9:	Cross border M&A experience bidder	Binary dummy variable: 1 for experienced bidder, 0 for bidder without experience
Var10:	Dummy for minority stake	Binary dummy variable: 1 for bidder that holds a minority stake in the target, 0 for bidder with no stake in the target it acquires
		Target country-specific factors
Var11:	Freedom of target market	Index of economic freedom: 1 for repressed economies to 5 for free economies[b]
Var12:	GDP growth in target country (in %)	GDP growth rate in target country at constant prices (in %)
Var13:	Rule of law	Extent to which agents have confidence in and abide by the rules of society, and in the quality of contract enforcement, the police and the courts[c]
Var14:	Inflation change (in %)	Inflation change in target country at consumer prices (in %)

Source: Accounting data – Fitch IBCA Bankscope; Freedom of Market – Heritage Foundation 2009; GDP growth and inflation change – United Nations Statistics Divisions; Rule of law – Kaufmann et al. (2008).

[a] Per December 31 of the year prior to the year of transaction announcement.

[b] The scale of the Heritage Foundation originally ranges from 0 to 100 with 0-50 for repressed economies, >50-60 for mostly unfree economies, >60-70 for moderately free economies, >70-80 for mostly free economies, and >80-100 for free economies. Since the values of this scale are not equally distributed, the scale is changed using 1 for repressed economies equivalent to 0-50, 2 for mostly unfree economies equivalent to >50-60, 3 for moderately free economies equivalent to >60-70, 4 for mostly free economies equivalent to >70-80, and 5 for free economies equivalent to >80-100. Moreover, steps of value of 0.5 divide the respective categories, e.g., a former value of 51 is transformed into the value of 2 whereas a former value of 56 gets the value of 2.5.

[c] Since 1996, the rule of law is calculated by Kaufmann et al. (2008). However, the data are not collected for the years 1997, 1999 and 2001. On this account, the average of the previous and following year of the missing respective years is taken to calculate the data.

3.4 Methodology and Data Sample

3.4.1 Methodology

This study targets to analyze two aspects. The first aspect should assess the wealth implications of cross-border bank M&A in EME through acquiring banks from industrialized countries in order to compare them with results from previous studies analyzing international bank M&A between industrialized countries. The second aspect aims at explaining the value creation and in particular, the preconditions for value creation of bank M&A deals in emerging financial markets.

To assess the value implication of cross-border M&A, the study follows the event study methodology relying on the market model based approach according to Brown & Warner (1985) and Dodd & Warner (1983).[13] Abnormal returns for firm j at date t (AR_{jt}) are estimated as $AR_{jt} = R_{jt} - \hat{\alpha}_j + \hat{\beta}_j R_{Mt}$, where R_{Mt} is the return of the local (national) industry index employed on day t. Since on the bidder and target side there are always banks, the national banking index offered by Datastream is utilized.[14] In their study, Cybo-Ottone & Murgia (2000) apply both the national industry index as market index and the general market index to conduct their analyses but could not detect any differences in using the general market index from using an industry index. Hereby, abnormal returns describe the difference between the expected returns and the actual returns observed in the market.

Since some bidding banks in the data sample completed several transactions within one year, the study deviates from the approach of previous studies (e.g., Beitel et al. (2004); Brown & Warner (1985)) by using a shorter estimation window to estimate both parameters. Hence, the market model parameters are estimated over an observation period of 100 trading days instead of 252 trading days (one full year) starting at day t_{-120} to t_{-21} relative to the announcement date. The study uses the announcement date as reported by Thomson Financial. The dates are crosschecked using press research in the Financial Times. The event window comprises 41 days: T = [-20;+20] days, where $t = 0$ determines the announcement day of a transaction. The abnormal returns are summed up over various event windows, e.g., [-1;+1], [-20;0] etc. to attain CAR for each stock in the sample. Finally, the CAR are aggregated over the stocks and divided by the number of stocks to yield the CAAR of the group. This is done for bidder as well as target banks.

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[13] The applied short-term methodology as well as the cross-sectional regression is explained in detailed by Chapter 2.3.1 and Chapter 2.3.4, respectively.

[14] For Croatia, Estonia, Latvia, Slovak Republic, and Slovenia, national banking indices are not available in Datastream due to an insufficient number of listed banks in these countries. In these cases, as a result, the banking index for emerging Europe is applied provided by Datastream.

This short-term CAAR will reflect changes in the expected future cash-flows to shareholders resulting from future synergies in the merging entity or from redistribution among shareholders. In a first step, only the effects on bidder shareholders are analyzed acquiring both listed and non-listed targets. In a second step, the effects on listed bidder and target shareholders are observed. This approach allows the study to examine both effects on bidder and target investors. To analyze the combined entity the study follows the suggestion by Houston & Ryngaert (1994). As market capitalizations for the entire event window, it relies on those observed at the end of the estimation period (on t = -21). Thereafter the abnormal returns for all observations are averaged to receive average abnormal returns.

To test for significance for CAAR, the standard t-test statistic and the suggestions by Dodd & Warner (1983) are applied. Beitel & Schiereck (2001), DeLong (2001), and Hudgins & Seifert (1996), for instance, have also employed the latter test statistic. Moreover, the test statistic is adjusted to reflect cross-sectional independence (Brown & Warner (1985); Dodd & Warner (1983)). To test for significance for the combined entity of the target and bidder, the study follows the suggestions by Houston & Ryngaert (1994) to adjust the calculation of the standard deviation.

Besides the overall value creation for bidders, targets and combined entities of cross-border M&A in EME, the respective drivers of the success in bank M&A transactions presented in the previous chapter are analyzed. Therefore, multivariate cross-sectional regression analyses are conducted to determine the influence of the respective variables on M&A success. The dependent variable in this regression analysis is the CAR of bidders, targets and combined entity, respectively. All conducted regressions are OLS-regressions assuming a linear relationship between the dependent and the independent variables. Moreover, they are controlled for autocorrelation using the Durbin-Watson statistic, multicollinearity using variance inflation factors and tolerance for individual variables, heteroscedasticity using the White test.

3.4.2 Data Sample

Relevant cross-border M&A transactions between 1994 and 2007 are identified using the Thomson Financial SDC (Securities Data Company – Mergers and Acquisitions Database). Moreover, Datastream (also provided by Thomson Financial) is employed to attain returns on individual equities, market indices, and market caps. For the analysis of accounting data (e.g., total equity; total assets) of the banks analyzed in the sample, the study relies on Fitch IBCA Bankscope and where necessary on annual reports. The respective transactions are chosen according to the following criteria:

- Transactions have been announced between January 1, 1994 and December 31, 2007.
- Bidders have been classified either as a Western European bank[15] or as a North American bank[16].
- Targets have been classified according to TF Mid Code either as "bank" or as "credit institution".
- Targets were located in emerging countries[17] of Asia, CEE, and LatAm.
- Transactions have been closed – the deal status hence is "completed".
- In all transactions, a true change of corporate control took place – bidders attain full control (>50%) over the targets after the transaction.[18]
- Bidders were listed on a public stock exchange for at least 120 days prior to the announcement and 20 days after the announcement of transaction.

Since the study is analyzing in a second step only transactions where both bidders and targets are publicly listed, an additional selection criterion needs to be applied:

- Targets were listed on a public stock exchange for at least 120 days prior to the announcement and 20 days after the announcement of transaction.

According to the first seven selection criteria, 163 transactions are identified initiated by listed banks located in industrialized countries purchasing majority stakes in banks from EME. As shown in Figure 3.2, the transaction volumes of the entire sample have risen steadily since 1994 reaching their first peak with approximately USD 5.8 bn in 1999 – the starting point of the privatization phase in CEE (Patev, Lyroudi, & Kanaryan (2002)). The decreasing transaction volumes after 2001, however, point out the burst of the dot-com bubble. The recovery of the financial markets began in 2003 with augmenting transaction volumes and peaked with USD 13.7 bn in 2006. Moreover, applying the last described select criterion, 36

[15] Western European countries in the study: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, the UK, and Switzerland.

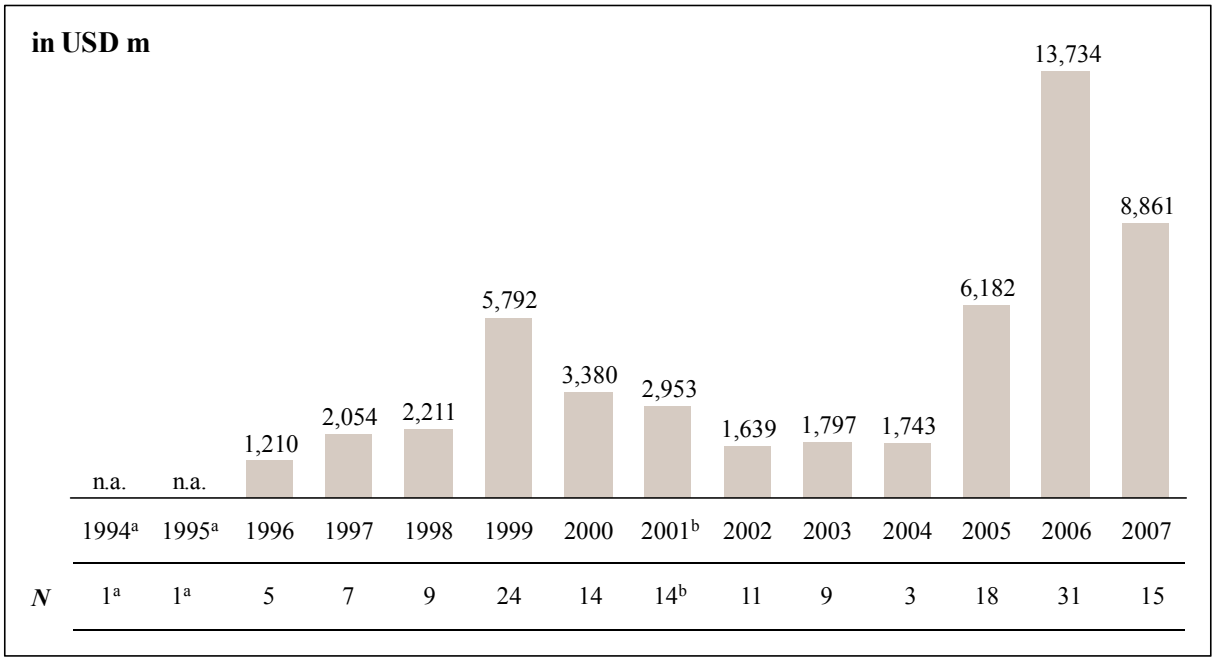
[16] Overview of North American countries: Canada and the US

[17] EME in the study: Albania, Argentina, Bosnia, Bulgaria, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Czech Republic, Dominican Republic, Estonia, Croatia, Hungary, Indonesia, Kazakhstan, Lithuania, Latvia, Moldova, Macedonia, Mexico, Malaysia, Panama, Peru, Philippines, Poland, Puerto Rico, Paraguay, Romania, South Korea, Russian Federation, Serbia & Montenegro, Slovak Republic, Slovenia, Salvador, Thailand, Turkey, Taiwan, Ukraine, Uruguay, Venezuela, and Yugoslavia.

[18] Only transactions with change of corporate control are chosen as these transactions are presumed to be value creating as they do not show problems of ineffective monitoring and incomplete contracting (Antràs (2003)).

transactions of the entire sample are recognized comprising both listed bidders and listed targets.

Figure 3.2: Development of Transaction Volumes/Entire Sample



Source: Own illustration; Thomson Financial SDC.
[a] Transaction volumes are undisclosed dollar values.
[b] Without the outlier transaction of USD 12,812 m (Citi (US) acquiring Banacci (Mexico)).

Table 3.2 presents a geographical and value-based overview of the identified transactions between 1994 and 2007. The data reflect the ongoing penetration of CEE and LatAm banking sectors and more recent penetration of Asia. Hereby, Western European banks are very active acquirers of EME banks applying cross-border M&A as an entry point into host financial markets. Regarding Panel I, they purchased 138 banks for USD 45.3 bn whereas North American banks acquired 25 banks for USD 19.6 bn. This partly reflects the strategic decision by some North American banks concentrating on organic growth rather than on M&A activities. Concerning the average value, one can see that the Asian targets of Western European banks are on average the most expensive. For the North American bidders, however, the targets from LatAm are the most costly. Regarding Panel II, the picture looks equal to the one given by Panel I: Western European banks are more active than North American banks. Although Panel II contains fewer transactions, the average transaction value is higher compared to Panel I, strengthening the fact that listed targets are more expensive than non-listed as financial markets request a premium for value transparency.

A more detailed overview of geographical distribution by bidding countries and target regions of the identified transactions is given in the appendix (Appendix 1 shows all 163 transactions; Appendix 2 displays only transactions involving listed targets). According to

Appendix 1, Austria, France, Greece, Italy, Spain, the UK, and US are the seven countries with above average bidder activity. Moreover, Western European banks (excluding Spanish ones) have predominantly purchased stakes in CEE banks (95 out of 119 targets) whereas Spanish banks acquired almost exclusively stakes in LatAm banks (18 out of 19 targets). These patterns express the fact that Spanish banks sought for targets with shared language and culture while other European banks purchased banks, which are geographically close by their home markets. This fact even holds true if looking at transactions involving only listed targets and bidders (Appendix 2). With regards to North American bidders, their numerically lower transaction activity occurred by the majority in LatAm (14 deals) what amplifies again the importance about geographically proximity if the cultural background and language are different. As measured by the sample of 36 transactions, however, US banks as the most active acquirers besides Italian banks target prevalently purchasing Asian institutions.

Table 3.2: Overview of Cross-Border M&A Transaction Sample – Descriptive Statistics

	Panel I: All targets				*Panel II: Listed targets*			
FDI flow	*N*	*Value (USD m)*	*Share of value (%)*	*Average value (USD m)*	*N*	*Value (USD m)*	*Share of value (%)*	*Average value (USD m)*
EUR-ASIA	7	4.957,30	7,6	708,19	2	1.332,38	4,8	666,19
EUR-CEE	96	25.192,42	38,8	262,42	23	9.260,77	33,4	402,64
EUR-LATAM	35	15.161,64	23,4	433,19	5	3.282,82	11,8	656,56
EUR-EME	*138*	*45.311,37*	*69,8*	*328,34*	*30*	*13.875,97*	*50,0*	*462,53*
NA-ASIA	8	2.092,33	3,2	261,54	4	449,42	1,6	112,35
NA-CEE	3	1.045,92	1,6	348,64	1	610,92	2,2	610,92
NA-LATAM	14	16.429,72	25,3	1.173,55	1	12.821,00	46,2	12.821,00
NA-EME	*25*	*19.567,97*	*30,2*	*782,72*	*6*	*13.881,33*	*50,0*	*2.313,56*
Total EME	***163***	***64.879,34***	***100,0***	***398,03***	***36***	***27.757,30***	***100,0***	***771,04***

Source: Own illustration; Thomson Financial SDC.
Note: EUR = Western Europe; NA = North America.

Finally, Table 3.3 presents an overview of the selected key figures of the identified transactions in the sample. With regards to total assets (USD 412 bn) and total equity (USD 20.7 bn), bidder banks are on average tremendously larger than the overall targets (total assets: USD 4.3 bn; total equity: USD 0.4 bn) presented by Panel I. The highly significant differences in means underlines the fact that the banking industry in EME is still underdeveloped as targets are rather small compared to their acquirers. Moreover, their weak cost-efficiency reflected by high mean CIR and CA-Ratios indicate potential synergy gains which can be achieved by respective actions of the bidding banks.

Observing exclusively listed targets in Panel II, the average difference between targets and their bidders regarding total assets and a total equity is indeed important but one can

notice that listed targets are larger compared to the entire data sample shown in Panel I with total assets of USD 9.7 bn and total equity of USD 0.9 bn. Moreover, bidders are more profitable and efficient demonstrated by the higher ROAE and lower CIR and CA-Ratio compared to targets, respectively. This holds true for both panels. However, listed targets seem to be more cost efficient as the mean difference between listed targets' CIR and bidders' CIR is not significant anymore.

Table 3.3: Key Figures of Cross-Border Transactions

	Panel I: All targets (N=163)				*Panel II: Listed targets (N=36)*			
Characteristics	*Targets*	*Bidders*	*Ratio (T/B)*	*Diff. in Means (t-value)*	*Targets*	*Bidders*	*Ratio (T/B)*	*Diff. in Means (t-value)*
Total assets in USD m								
Mean	4.276,09	411.950,26	1,0%	-12.1***	9.740,35	433.280,19	2,2%	-6.4***
Standard deviation	8.144,28	429.013,70			11.275,75	399.810,67		
Min.	9,60	1.726,68			324,81	60.738,95		
Max.	46.546,01	1.896.935,34			46.546,01	1.884.318,00		
Total equity in USD m								
Mean	356,15	20.659,70	1,7%	-10.4***	875,67	22.503,01	3,9%	-5.5***
Standard deviation	744,75	24.815,77			1.213,68	23.569,55		
Min.	-263,79	76,77			30,66	1.843,77		
Max.	5.191,30	135.272,00			5.191,30	119.783,00		
Return on Average Equity (ROAE) in %								
Mean	7,38	15,94	46,3%	-2.9***	5,64	15,51	36,4%	-1.7*
Standard deviation	36,93	6,74			33,87	4,53		
Min.	-199,42	-18,47			-121,17	4,89		
Max.	267,60	45,92			49,47	25,10		
Cost-to-income ratio (CIR) in %								
Mean	75,43	62,73	120,2%	3.7***	66,29	65,87	100,6%	0,14
Standard deviation	43,47	8,01			16,31	6,84		
Min.	12,87	44,88			41,50	53,42		
Max.	391,67	92,27			106,48	81,79		
Total operationg costs/total assets in %								
Mean	6,67	2,58	257,9%	9.4***	5,12	2,65	193,1%	5.5***
Standard deviation	5,26	1,82			2,49	1,03		
Min.	0,67	0,94			1,74	0,96		
Max.	32,80	23,11			14,47	5,99		

Source: Own illustration; Fitch IBCA Bankscope; Annual bank reports.
Note: Financial figures are per December 31 of the year prior to the year of transaction announcement.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

3.5 Empirical Results

3.5.1 Short-term Valuation Effects to all Bidders

The event study results of the entire sample for banks acquiring (non-) listed targets in EME are given in Table 3.4. Although the analyzed intervals apart from [-10;0] show slightly negative cumulative abnormal returns, these negative results are not statistically significant employing both the t-test and z-test. Thus, there is no conclusive evidence that shareholders at

acquiring banks experience value creation or destruction through M&A deals in EME. The results are consistent with previous US and European event studies of bank cross-border M&A occurring between industrialized countries as they also detect no significant abnormal returns for bidding banks on average (e.g., Beitel et al. (2004); Cybo-Ottone & Murgia (2000); Hudgins & Seifert (1996)). The market does not recognize potential benefits and competitive advantages to industrialized bidders entering new financial markets in emerging countries. Hence, the positive findings for bidder banks in the studies of Kiymaz (2004) and Waheed & Mathur (1995) could not be confirmed by the results. The results presume that acquired targets are too small having positive overall effects to bidders as shown by Table 3.3 with large bidders and small targets.

Table 3.4: CAAR to all Bidders

Returns to all transactions (N=163)

Event window	*CAAR (%)*	*t-value*	*z-score*	*Median (%)*	*Std.dev. (%)*	*Positive*	*Pos. (%)*
[-20;0]	-0,21	-0,62	-0,30	0,03	4,38	83	50,9
[-10;0]	0,02	0,10	0,28	0,01	3,11	82	50,3
[-5;0]	-0,17	-0,77	-0,54	-0,11	2,73	77	47,2
[-1;0]	-0,01	-0,14	-0,53	-0,09	1,28	77	47,2
[0]	-0,01	-0,08	0,08	0,00	0,98	81	49,7
[-1;+1]	-0,05	-0,44	-0,29	-0,05	1,55	79	48,5
[-5;+1]	-0,21	-0,93	-0,41	-0,10	2,82	75	46,0
[-10;+1]	-0,02	-0,06	0,34	0,01	3,14	82	50,3
[-5;+5]	-0,32	-1,35	-0,65	-0,12	3,06	77	47,2
[-10;+10]	-0,25	-0,75	-0,50	-0,22	4,20	76	46,6
[-20;+20]	-0,40	-0,83	-0,37	-0,52	6,08	79	48,5

Source: Own calculations; Return Index data – DataStream.
This table reports the cumulative average abnormal returns to all bidders acquiring listed and non-listed targets in EME. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Looking closer at CAAR subdivided into the respective target regions presented by Table 3.5, international banks purchasing majority stakes in Latin American banks receive throughout positive returns in the observed intervals, which are statistically significant for the event windows [-10;0] and [-10;+1]. The data suggest that such acquisitions are perceived as value creating by financial markets of the purchasing bank. Since almost 42% of the deals in LatAm originate from Spanish and Portuguese banks (19 deals), the stock markets expect positive developments from these transactions, as the cultural background and the language in Spain and Portugal are similar to those in LatAm (Berger, DeYoung, et al. (2000)). The bidders' CAAR of acquiring Asian targets are mixed. Whereas the mean returns are significantly

negative at announcement date with -0.53%, they display a significant value of +2.06% for the interval [-20;+20]. It seems that over the whole event window the market perceives acquisitions in Asia as value creating. Moreover, apart from the announcement day acquisitions in CEE banks display only negative returns. As the respective tests attest statistical significance of the negative abnormal returns, transaction in CEE countries are perceived as value destroying for bidder bank shareholders. These results subdivided by target regions contradict partly previous studies of international bank M&A deals as the market perceives some regions as opportunity to export successfully their business abroad. Nevertheless, the results regarding the CAAR to bidders targeting banks in CEE and in LatAm, respectively, contradict the findings of Williams & Liao (2008) analyzing significantly negative bidder CAAR in LatAm and positives ones in CEE.

Table 3.5: CAAR to all Bidders by Regions

Returns by regions (N=163)									
	Asia (N=15)			*CEE (N=99)*			*LatAm (N=49)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	1,13	0,75	0,93	-0,82	-1,89 *	-1,47	0,59	1,08	0,97
[-10;0]	0,63	0,47	1,11	-0,39	-1,27	-1,18	0,67	2,01 *	1,56 *
[-5;0]	-0,19	-0,17	-0,34	-0,37	-1,32	-1,32	0,25	0,91	1,00
[-1;0]	-0,55	-1,37	-1,23	-0,02	-0,12	-0,48	0,16	0,96	0,25
[0]	-0,53	-1,70	-1,56 *	0,00	-0,04	0,05	0,15	1,01	0,76
[-1;+1]	-0,57	-1,50	-0,47	-0,07	-0,45	-0,69	0,14	0,68	0,53
[-5;+1]	-0,21	-0,21	0,03	-0,43	-1,47	-1,42	0,24	0,74	1,14
[-10;+1]	0,62	0,49	1,32	-0,44	-1,48	-1,28	0,65	1,67 *	1,65 *
[-5;+5]	-0,29	-0,33	0,10	-0,53	-1,71 *	-1,59 *	0,08	0,20	0,98
[-10;+10]	0,47	0,36	1,01	-0,49	-1,13	-1,37	0,02	0,05	0,34
[-20;+20]	2,06	1,09	1,58 *	-1,19	-1,86 *	-1,41	0,46	0,69	0,40

Source: Own calculations; Return Index data – DataStream.
This table reports the cumulative average abnormal returns to all bidders acquiring listed and non-listed targets subdivided by regions in EME. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Returns according to the nationality of acquiring banks are presented in Table 3.6. The largest returns to bidder bank shareholders are observed when ownership stakes are acquired by Spanish banks. The positive mean returns vary between +0.30% of interval [-10;+10] and +1.55% of event window [-20;0]. Since both significance tests approve meaningful results, this may reflect the stock market's belief that Spanish banks can carry their domestic efficiency advantages into overseas markets supported by common culture and language (Berger, DeYoung, et al. (2000)). This fact is even amplified if bearing in mind that the returns to bidders acquiring Latin American banks are value-creating as they are positively

influenced by the returns of Spanish bidders. Italian bidder banks, on the other hand, predominately experience negative average abnormal returns. Given that both event windows [-5;0] and [-5;+1] with -1.45% and -1.65%, respectively, are statistically significant, the Italian market perceives cross-border M&A transactions of its local banks towards emerging countries as value destroying. Unlike Spanish bidders, the stock market does not believe that Italian banks are able to install their efficiency advantages abroad as bidders and targets do not share the same culture and language.

Table 3.6: CAAR by Nationality of all Bidders

Returns by nationality of bidder banks (N=163)

	North American[a] *(N=25)*			*European*[b] *(N=98)*			*Italian (N=21)*			*Spanish (N=19)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	1,14	1,19	1,17	-0,67	-1,72 *	-0,87	-1,30	-0,99	-1,56	1,55	1,85 *	1,48
[-10;0]	0,60	0,73	1,09	-0,18	-0,63	-0,88	-0,77	-1,03	-0,91	1,22	2,46 **	2,50 **
[-5;0]	0,08	0,13	0,05	-0,14	-0,57	-0,84	-1,46	-1,97 *	-2,00 **	0,82	1,70	2,43 **
[-1;0]	0,08	0,24	-0,15	-0,08	-0,61	-1,00	-0,15	-0,52	-0,40	0,35	1,52	1,21
[0]	-0,01	-0,06	-0,58	-0,06	-0,59	-0,36	-0,08	-0,42	-0,40	0,34	1,48	1,90 *
[-1;+1]	-0,02	-0,07	0,15	-0,09	-0,58	-0,59	-0,34	-0,89	-0,92	0,40	1,09	1,37
[-5;+1]	-0,02	-0,03	0,23	-0,15	-0,59	-0,63	-1,65	-2,27 **	-2,23 **	0,87	1,33	2,50 **
[-10;+1]	0,50	0,61	1,18	-0,19	-0,66	-0,73	-0,96	-1,52	-1,17	1,27	1,85 *	2,59 ***
[-5;+5]	-0,17	-0,24	0,51	-0,30	-1,09	-1,20	-1,19	-1,52	-1,23	0,32	0,42	1,72 *
[-10;+10]	-0,49	-0,44	0,19	-0,53	-1,36	-1,35	0,89	0,88	0,42	0,30	0,40	1,09
[-20;+20]	1,03	0,70	0,68	-1,01	-1,91 *	-0,85	-0,35	-0,19	-0,80	0,87	0,81	0,96

Source: Own calculations; Return Index data – DataStream.

This table reports the cumulative average abnormal returns to all bidders acquiring listed and non-listed targets in EME subdivided by nationality of bidder banks. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).

[a] North American includes transactions involving Canadian and US bidders.

[b] European excludes transactions initiated by Italian and Spanish bidders.

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Moreover, the sub-sample of North American bidders including Canadian and US bidder banks demonstrates statistically insignificant results. As the average abnormal returns display positive as well as negative values, a concrete statement about wealth creating or destroying cross-border M&A activities of North American banks cannot be made. The last sub-sample containing European bidders predominately purchasing targets in CEE generates only negative CAAR. As two intervals display significantly negative mean returns, value is destroyed in the short-run ([-20;0]; [-20;+20]). Although the geographical distance between bidders and their CEE targets is not as large as between Spanish banks and their targets in LatAm, the markets do not believe in overcoming the efficiency barriers such as differences in languages, cultures or politics. Investors seem to be punished for the still uncertain business environment in Eastern European emerging countries. Moreover, the study assumes that syn-

ergies are not easily to obtain in these ancient communist countries and that high investments are necessary in the beginning to realize a beneficial outcome in the long run. These assumptions are also underlined by the negative results to acquisitions in the CEE region (Table 3.5).

Overall, the whole data sample shows no differences in wealth creation to previous studies analyzing deals between industrialized countries as the respective values are insignificant negatively. With regards to sub-samples, however, the assumption that cross-border bank M&A transactions in EME generate wealth to bidding banks' shareholders is partly confirmed. Hence, these results are different to the ones of previous studies.

3.5.2 Cross-sectional Regression Analysis of all Bidders

In order to determine the influence of the respective value drivers, which shall explain cross-border M&A success and identify differences to previous studies analyzing international bank transactions between developed countries, several cross-sectional OLS regressions of the 5-day cumulative abnormal returns are conducted. The characteristics of these drivers are summarized in Appendix 3, from which some outliers are excluded for the regression analysis in order to prevent bias. Table 3.7 gives a summary of the different regression models which were performed for CAR of all bidders.

In all regression models neither the target ROAE nor the relative ROAE have any explanatory power. Although both variables are negative correlated to the bidder CAR in all regressions, this negative relation is not significant. These findings contradict the findings of previous research (Pilloff (1996)), which observe a strong negative correlation between relative ROAE and bidder CAR. Thus, profitability of the target bank does not seem to be a driver for a successful bank acquisition and abandons the hypotheses that bidders targeting unprofitable banks located in EME exhibit a significant higher CAR. Moreover, the target CIR as well as the relative CIR also show no explanatory power. On contrary to previous studies, the assumption that a less cost efficient target is value creating does not hold true (synergy hypothesis; Hawawini & Swary (1990)). Target CA-Ratio and relative CA-Ratio give again no explanations for the success of M&A transactions as both variables do not show any consistent relationship to bidder CAR. These findings hazard a guess that profitability and cost efficiency factors do not play a predominant role. Hence, the market considers accounting data of (non-) listed targets in EME as unreliable contradicting the results of studies analyzing determinants of M&A success of bidders targeting banks in developed countries (e.g., Beitel et al. (2004)).

The relative asset size of targets to bidders has explanatory power in the regression models. However, the findings contradict the assumption and other empirical results (e.g.,

Zollo & Leshchinkskii (2000); Hawawini & Swary (1990)): Apart from Models II and IV, the study displays significantly positive influence of relative asset size on bidder CAR. Although the integration of smaller targets might be less complex, these findings argue for the hypothesis that larger target banks enable larger potential synergy gains for bidder banks and thus influence the success of M&A positively. This might be a peculiarity in EME as targets are less efficient and therefore, bidder banks from industrialized countries can easily realize synergy gains in their investments even if targets are larger.

Table 3.7: Determinants of the CAR to all Bidders

Estimated coefficients are determined using a multivariate regression of the CAR to all bidders in the 11-day event window [-5;+5][a] against a number of explanatory variables.[b]

CAR [-5;+5]; Estimation Period [t_{-120};t_{-20}]	*Model I*	*Model II*	*Model III*	*Model IV*	*Model V*
Constant	-0,04121	-0,02207	-0,06063 **	-0,04716 *	-0,04247
Profitability and Cost Efficiency					
Target ROAE	-0,00016	-	-0,00004	-	-0,00001
Target CIR	-0,00013	-	-0,00007	-	-0,00007
Target CA-Ratio	-0,00075	-	-0,00016	-	-0,00009
Relative ROAE	-	-0,00168	-	-0,00059	-
Relative CIR	-	-0,0088	-	-0,00755	-
Relative CA-Ratio	-	-0,00089	-	0,00021	-
Asset Size					
Relative asset size	0,0794 **	0,04231	0,07555 **	0,05743	0,06322 *
Deal Specific Factor					
Listed target	-0,01902 ***	-0,01615 **	-0,01078	-0,00888	-0,01223 *
Bidder Experience					
M&A expericence	0,01393 **	0,01631 ***	0,01287 **	0,01445 **	0,01449 **
Stake	0,00883	0,00995	0,00264	0,00424	0,00338
Target Country Specific Factors					
Freedom of market	-0,00173	-0,00027	-	-	-
GDP growth	-0,00109 **	-0,0021 ***	-	-	-0,0021 ***
Rule of law	-	-	-0,00255	-0,00217	-0,00578
Inflation change	-	-	0,00031	0,00023	-
Number of Observations	136	135	148	147	150
Adj. R^2	0,107 ***	0,1094 ***	0,038	0,0417	0,0779 **

Source: Own calculations; Fitch IBCA Bankscope; Heritage Foundation 2009; United Nations Statistics Divisions; Kaufmann et al. (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 163 bidder banks using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 3.3, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Considering listed and non-listed targets, listed ones have a significantly negative influence on the success of M&A transactions in all conducted regression models. Although only 24% of the targets[19] are publicly traded at the time of the acquisition announcement, the CAR of bidders are negatively influenced by this circumstance. The expectations prove true

[19] The relation of 24% based on the 36 listed target and data sample of 151 transactions excluding outliers.

that listed targets are value diminishing. Therefore, the study argues that market participants are likely to see the danger of overpaying when acquiring a public target by paying too high premiums. This argument is also proposed by Kiymaz (2004).

The results show that bidder experience has significantly positive influence on M&A success. They prove that especially in emerging markets, acquiring banks benefit from their cross-border M&A experiences and hence, perform value-creating M&A transactions, which may generate higher synergies. They are in line with previous research (DeYoung (1997); Zollo & Leshchinkskii (2000)), which also expose a significantly positive correlation between codification of experience related to M&A deals and bidder CAR. The "stake" variable, which shows whether the acquiring bank held a minority stake in the target prior to the transaction interpreting as specific experience allow no meaningful interpretation. Hence, overall experience in cross-border mergers seems to positively influence abnormal returns, while deeper insight into the operations and financials of the targets does not lead to successful M&A deals. This leads to the interpretation that the overall experience of the bidders outweighs the inside knowledge and that the market believes in bidder's ability of a correct stand-alone value assessments of the target. This explanation is strengthened by respective event study results demonstrating no positive CAR to acquisitions in which bidder banks already hold stakes in the acquired banks.

Finally, regarding target country-specific factors, the variables freedom of market, rule of law, and inflation change have any explanatory power regarding cross-border M&A success displaying insignificantly coefficients in all models. The only factor, which is highly significant related to the bidder CAR, is GDP growth in the respective target countries. Using only GDP growth as a proxy for the degree of economic development, the study confirms the hypothesis that acquisitions in less developed markets in EME create more value. Bidding banks expanding in less developed countries face less foreign competition and might be able to maintain higher profitability. The diversification benefits, in combination with the advantages of lower competition might outweigh the political risk and uncertain business environment associated with expansion in such countries. Summarizing the determinants of bidders' CAR targeting bank in EME differ from the explaining variables of bidders' CAR purchasing stakes in banks located in industrialized countries.

3.5.3 Short-term Valuation Effects to Sub-Sample

Analyzing only transactions involving listed bidders and listed targets, the study examines that the overall CAAR for bidder banks, although not statistically significant, are more negative compared to the bidder CAAR of entire data sample; e.g., CAAR of -0.40% (all transactions) vs. CAAR of -0.90% (sub-sample) for the interval [-20;+20]. Besides of displaying

more negative values, the mean abnormal returns demonstrate significantly negative values. According to the standard t-test, intervals [-5;0] and [-5;+5] are meaningful confirming the hypotheses that listed targets in EME are seen as more risky investments as they are more expensive, and the uncertainties whether the investments are paid off and promised synergies are realizable in the medium term are very high. Table 3.8 presents the respective CAAR to bidders.

Table 3.8: CAAR to Bidders

Returns to bidder banks (N=36)							
Event window	*CAAR (%)*	*t-value*	*z-score*	*Median (%)*	*Std.dev. (%)*	*Positive*	*Pos. (%)*
[-20;0]	-0,59	-0,63	-0,74	-1,04	5,63	16	44,4
[-10;0]	-0,61	-1,10	-0,31	-0,25	3,36	16	44,4
[-5;0]	-0,86	-1,86 *	-1,19	-0,42	2,77	13	36,1
[-1;0]	-0,23	-0,97	-0,85	-0,23	1,44	17	47,2
[0]	-0,24	-1,31	-1,01	0,01	1,10	18	50,0
[-1;+1]	-0,15	-0,53	0,22	0,00	1,70	19	52,8
[-5;+1]	-0,78	-1,58	-0,50	-0,35	2,95	15	41,7
[-10;+1]	-0,53	-0,94	0,16	-0,29	3,39	16	44,4
[-5;+5]	-0,78	-1,67 *	-0,69	-0,15	2,79	16	44,4
[-10;+10]	-0,52	-0,74	-0,18	-0,18	4,24	17	47,2
[-20;+20]	-0,90	-0,70	-0,64	0,15	7,65	18	50,0

Source: Own calculations; Return Index data – DataStream.
This table reports the cumulative average abnormal returns to bidders acquiring listed targets in EME. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Turning the attention on the target bank CAAR, only positive results can be observed, which are highly significant according their z-scores and partly significant according the standard t-test as demonstrated in Table 3.9. They symbolize important wealth creation to target bank shareholders in EME ranging from +0.64% of interval [-1;+1] to +6.26% of event window [-10;+10]. Despite of the positive mean abnormal returns, they are much smaller compared to targets' CAAR purchased in developed countries (e.g., the lowest CAAR to targets in the study of Beitel & Schiereck (2001) is at announcement day with +8.27%). The lower values may indicate that the wealth creation to shareholders in EME is not as developed as in industrialized countries as emerging market targets do not receive a distinct takeover premium as developed market targets do.

Table 3.9: CAAR to Targets

Returns to target banks (N=36)							
Event window	*CAAR (%)*	*t-value*	*z-score*	*Median (%)*	*Std.dev. (%)*	*Positive*	*Pos. (%)*
[-20;0]	4,33	1,44	3,66 ***	1,83	18,09	19	52,8
[-10;0]	5,21	2,52 **	5,19 ***	2,45	12,41	25	69,4
[-5;0]	3,06	2,24 **	4,88 ***	1,06	8,20	21	58,3
[-1;0]	1,18	1,67 *	3,31 ***	0,26	4,25	20	55,6
[0]	0,75	1,43	3,55 ***	0,10	3,16	19	52,8
[-1;+1]	0,64	0,56	2,87 ***	0,59	6,82	20	55,6
[-5;+1]	2,52	1,46	4,63 ***	0,96	10,38	19	52,8
[-10;+1]	4,67	2,24 **	5,05 ***	2,37	12,51	22	61,1
[-5;+5]	3,72	1,79 *	4,74 ***	0,47	12,51	19	52,8
[-10;+10]	6,26	2,42 **	4,91 ***	4,34	15,50	21	58,3
[-20;+20]	2,17	0,54	2,61 ***	1,87	24,35	19	52,8

Source: Own calculations; Return Index data – DataStream.
This table reports the cumulative average abnormal returns to targets located in EME. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983). ***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

The joint returns of bidders and targets show negative cumulative abnormal returns as seen in Table 3.10. The t-test detects the negative returns of internal [-20;0] as significant at the 10% level. The test according to Dodd & Warner (1983), however, demonstrates no meaningful findings. Nevertheless, the findings permit to state that bank M&A transactions in EME initiated by banks from industrialized countries cannot be considered on average as wealth creating from an overall economic point of view. Stressing again the negative bidder results and positive target results just a transfer in value from the shareholders of bidders to the shareholders of targets happens contradicting previous event studies identifying significantly positive CAAR to combined entities (e.g., Beitel & Schiereck (2001); Hawawini & Swary (1990)). As the targets in EME are rather small and the acquirers are large entities with regards to their market capitalization, it is most likely that the negative returns to bidders outweigh the positive returns of targets resulting in negative combined entity returns. This fact is perfectly illustrated by Figure 3.3 presenting CAAR to combined entities with the same gradient as CAAR to bidders, only with slightly higher values.

Table 3.10: CAAR to Combined Entities

Returns to combined entities (N=36)							
Event window	*CAAR (%)*	*t-value*	*z-score*	*Median (%)*	*Std.dev. (%)*	*Positive*	*Pos. (%)*
[-20;0]	-1,47	-1,96 *	-1,13	-1,44	4,49	15	41,7
[-10;0]	-0,71	-1,26	-0,40	-0,02	3,40	17	47,2
[-5;0]	-0,65	-1,43	-0,78	-0,06	2,73	17	47,2
[-1;0]	-0,11	-0,49	-0,61	-0,04	1,37	18	50,0
[0]	-0,24	-1,22	-1,04	0,02	1,18	19	52,8
[-1;+1]	-0,15	-0,53	0,17	-0,11	1,70	17	47,2
[-5;+1]	-0,69	-1,44	-0,29	-0,31	2,87	16	44,4
[-10;+1]	-0,75	-1,31	-0,05	-0,59	3,44	16	44,4
[-5;+5]	-0,80	-1,64	-0,70	-0,06	2,93	17	47,2
[-10;+10]	-0,68	-0,98	-0,25	-0,09	4,19	18	50,0
[-20;+20]	-2,08	-2,05	-1,17	-2,51	6,08	17	47,2

Source: Own calculations; Return Index data – DataStream.
This table reports the cumulative average abnormal returns to combined entities. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

In the next step, the study analyzes sub-samples according to target regions as presented by Appendix 4. The returns for banks purchasing stakes in listed Asian banks present consistently negative values whereas the entire data sample display some positive values (cp. Table 3.5). Hence, transactions between bidder banks and listed targets in Asia are perceived as value destroying deals. Since the bidders of Asian listed targets are exclusively US banks, the initiator's stock market does not value these transactions positively. Similar to previous findings of all 163 transactions, bidders in CEE experience negative results by purchasing listed CEE banks. Moreover, their CAAR are more negative compared to former results with statistical significance. Moreover, compared to the entire data sample, bidders targeting exclusively listed banks in LatAm display higher returns at a more profound significance level of 5%. Although presenting two negative returns, the positive results for the bidder banks acquiring listed LatAm banks are higher as for bidder banks purchasing stakes in (non-) listed banks of the same region. Equally to the entire data sample, same cultural background and language are evaluated positively by bidder stock market as predominately Spanish banks acquired stakes in LatAm banks.

Taking into account the abnormal returns to public targets banks, the study observes that returns for Latin American banks are partly negative and partly positive. However, the positive returns are statistically significant. Regarding returns to target banks in the regions of Asia and CEE, a transfer in value can be detected from bidding banks to targets: The CAAR for Asian and CEE targets are significantly positive. Especially by considering the respective

returns to combined entities, this transfer is realizable as the combined entity returns are negative and even significantly negative in CEE. This result underlines the fact that the joint returns are rather influenced by negative returns to bidders instead by positive returns to targets. This one-way value transfer, however, is not observable in case of combined entities, e.g., in LatAm. The study analyzes significantly positive combined returns of three event windows going up to 2.56% for [-20;0], which are influenced by the positive returns to bidders banks. For this reason with regards to transaction towards LatAm, the results confirm previous studies analyzing bank M&A between industrialized countries with positive combined entity returns (e.g., Beitel & Schiereck (2001); Hawawini & Swary (1990)).

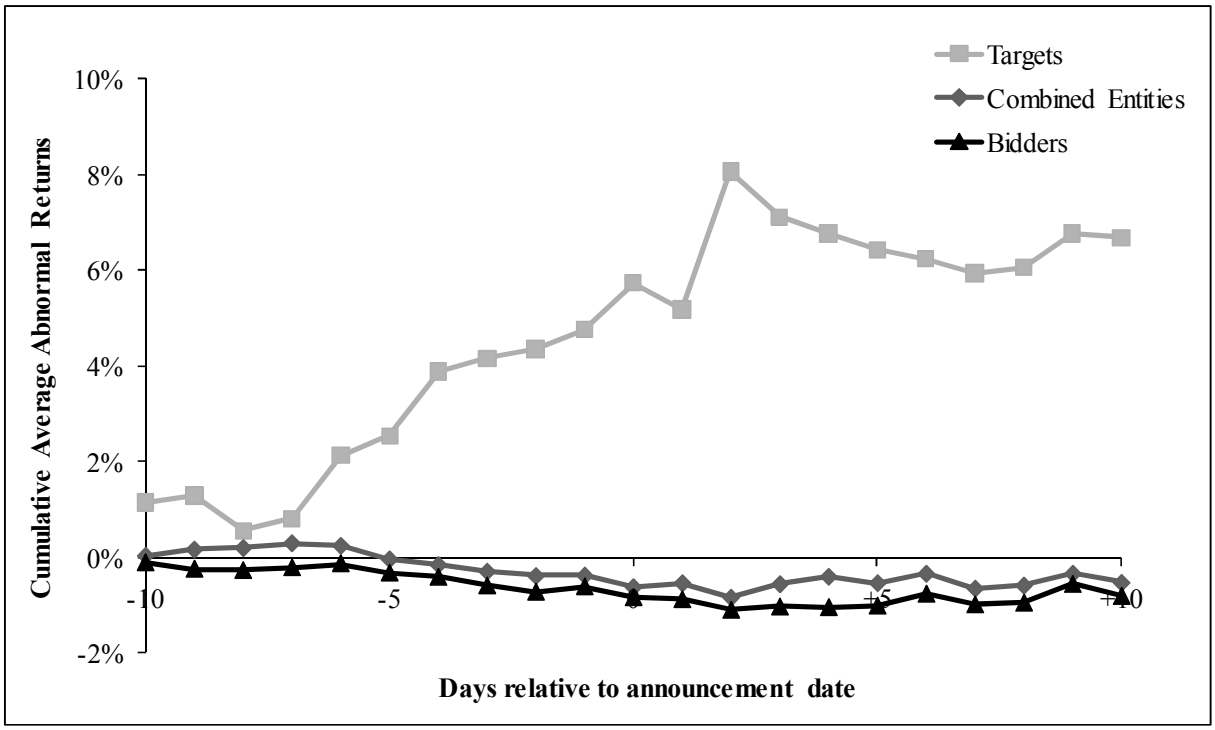
Considering the returns by nationality of bidder banks, this smaller sample again is clustered in four panels as seen in Appendix 5. Compared to the bidders of 163 transactions (Table 3.6) the study attains a similar picture of results for the acquirers of 36 transactions of listed banks. Hence, Spanish bidders purchasing exclusively LatAm banks experience significantly positive returns. The wealth creation to bidder shareholders expresses the confidence that Spanish banks are able to implement their efficient structures within overseas banks supported by familiar culture and language. US banks, on the other hand, experience significantly negative returns symbolizing wealth destruction for US banks' shareholders. The returns to Italian bidder banks of the sub-sample are less negative and now insignificant compared to the entire sample. Comparing the European bidder bank returns between the sub- and whole data sample, the negative sub-sample returns are more profound with statistical significance.

Turning the attention to target bank returns, one can observes – apart from target returns of Spanish banks – that returns to targets of US, European and Italian banks are significantly positive symbolizing wealth creation for EME shareholders. Moreover, the positive returns are especially strong for targets of European bidder banks. Since they are targeting predominately targets in CEE, this means a huge wealth transfer from bidder to target shareholders investing in CEE. This fact is underlined observing the returns of the combined entities of European bidder banks. Although they are only significantly negative on the announcement day, it is assumed that the negative returns to European bidder banks overweight the positive returns to target banks of European bidders. This also holds true in case of transactions initiated by Italian banks: The interval [-20;0] with -3.14% is significantly negative at the 5% level according the standard t-test.

This wealth transfer is as well as observable for US banks: The returns to combined entities are negative whereas target returns show a positive and bidder returns a negative sign. Looking at returns to combined entities for Spanish bidders, the study examines that for some event windows the joint returns are significantly positive symbolizing a wealth creation from the transactions. Moreover, the study again stresses the specific performance of returns to

Spanish bidders and to targets of Spanish banks: Spanish bidder banks show significant positive returns whereas targets of Spanish banks are negative. This can be explained by bidder shareholders expecting positive synergies from the transactions and by target shareholders fearing the loss of national champions and the dependence on foreign banks. However, the joint returns to combined entities are significantly influenced by the returns to Spanish acquirers.

Figure 3.3: CAAR to Targets, Bidders, and Combined Entities



Source: Own calculations and illustration; Return Index data – Thomson Financial DataStream.

3.5.4 Cross-sectional Regression Analysis of Sub-Sample

Considering the impact of value drivers on the sub-sample of 36 transactions, the study also performs several cross-sectional OLS regressions in the [-5;+5] event window according to bidders, targets, and combined entities as presented by Table 3.11, Table 3.12, and Table 3.13, respectively. Since only transactions involving listed bidders and listed targets are observed, the previous dummy variable concerning deal-specific factor (Var8: Listed target) is excluded from the regressions. Appendix 6 gives an overview of the drivers' characteristics.

3.5.4.1 Bidder Bank Returns

The regression results of the first category profitability and cost efficiency are equal to the bidder findings of the entire data sample. Neither the target ROAE nor the relative ROAE have any explanatory power displaying negative values. Profitability of listed target banks does not seem to be a factor for a successful bank acquisition opposing previous research (e.g., Beitel et al. (2004), Pilloff (1996)). Moreover, target CIR as well as relative CIR also has no explanatory power. Since it is supposed that less cost efficient targets are value creating and the study examines that listed targets are more cost efficient compared to all target banks (Table 3.3), wealth creation through synergies might be even more difficult underlined by these findings. Although presenting negative coefficients, target CA-Ratio and relative CA-Ratio also do not explain the success of M&A transactions. All these findings underline the previous assumptions that the six accounting factors do not play a predominant role evaluating M&A deals from the view of bidder banks.

Different from the findings of Section 3.5.2, the relative asset size of targets to bidders has only weak explanatory power in these models. Only at Models II and V, the study demonstrates significantly positive influence of relative asset size on bidder CAR what nevertheless contradicts the initial assumption of integration benefits of smaller targets and other empirical results (e.g., Hawawini & Swary (1990); Zollo & Leshchinkskii (2000)). Although listed targets are bigger and their integration might be more complex, the results assume larger possible synergy gains for the bidders purchasing stakes in bigger targets. This result expresses a specific characteristic of EME that targets are less efficient and thus, the realization of synergies for bidder banks can be easily achieved even if targets are larger. However, it is also presumed that the bigger the targets the less value creating get the transactions and that there is a kind of "asset size efficient frontier" – after exceeding this frontier, transactions of bigger targets are getting value destroying.

Similar to all 163 transactions, bidder experience has significantly positive influence on acquisitions of listed banks. Bidders seem to benefit from their cross-border M&A expe-

rience to perform value-creating M&A transactions corresponding to previous studies (DeYoung (1997); Zollo & Leshchinkskii (2000)). The variable stake, however, gives again no meaningful results. Although the coefficients are positively correlated to the bidder CAR, there is no statistical significance. Therefore, the study asserts again that overall experience in cross-border M&A has a positive impact on CAR, deeper insight into the operations and financials of the listed targets does not seem to be advantageous.

Table 3.11: Determinants of the CAR to Bidders

Estimated coefficients are determined using a multivariate regression of the CAR to bidders in the 11-day event window [-5;+5][a] against a number of explanatory variables.[b]

CAR [-5;+5]; Estimation Period [t_{-120};t_{-20}]	*Model I*	*Model II*	*Model III*	*Model IV*	*Model V*
Constant	-0,08272	-0,10071	-0,04679	-0,03591	-0,08194
Profitability and Cost Efficiency					
Target ROAE	-0,00025	-	-0,00027	-	-
Target CIR	0,00025	-	0,00018	-	-
Target CA-Ratio	-0,00194	-	-0,00269	-	-
Relative ROAE	-	-0,00258	-	-0,00195	-0,00246
Relative CIR	-	-0,01885	-	-0,02186	-0,0286
Relative CA-Ratio	-	-0,00349	-	-0,00326	-0,00395
Asset Size					
Relative asset size	0,10562	0,16342 *	0,04139	0,06542	0,1288 *
Bidder Experience					
M&A expericence	0,02794 **	0,02876 ***	0,01848 *	0,01923 *	0,02199 **
Stake	0,01629	0,01398	0,01503	0,01244	0,01329
Target Country Specific Factors					
Freedom of market	-0,01199 *	-0,00935	-	-	-
GDP growth	-0,00142	-0,00179	-	-	-0,00077
Rule of law	-	-	-0,02171 *	-0,02131 *	-0,01631 *
Inflation change	-	-	-0,00001	-0,00045	-
Number of Observations	35	35	35	35	35
Adj. R^2	0,128	0,2775 **	0,1172	0,209 *	0,300 **

Source: Own calculations; Fitch IBCA Bankscope; Heritage Foundation 2009; United Nations Statistics Divisions; Kaufmann et al. (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 36 bidder banks using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 3.3, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Similar to the regression outcomes of Chapter 3.5.2, the variable inflation change has no explanatory power regarding cross-border M&A success. Of special interest are the remaining three target country-specific variables: GDP growth shows no significant relation to CAR in the sample of bidders acquiring only listed targets. Even though the coefficients in all regression models are negative, they are not statistically significant anymore. GDP growth as proxy for the degree of economic development cannot be used anymore evaluating M&A success of listed targets. The factor freedom of market, however, shows a significantly nega-

tive coefficient in Regression Model I reflecting that bidder returns are higher in highly regulated markets with little economic freedom. Lastly, the other factor displaying a slight significance at the 15% level is rule of law. The negative coefficient implies that returns to bidder shareholders on cross-border M&A deals are higher in countries with poorer governance. One explanation might be that investors are compensated for relatively poor governance and legal protection via a risk premium. Since poor governance and legal protection as well as little economic freedom are proxies for development of EME countries, the study confirms once more the hypothesis, even though proved by different factors, that acquisitions in less developed economies in EME create more value to bidder investors. The positive investment payoff based on synergy gains is assumed to outweigh the corresponding risks regarding political, legal and social differences. Recapitulating the determinants of bidders' CAR targeting listed bank in EME differ from the explaining variables of bidders' CAR purchasing stakes in banks located in industrialized countries.

3.5.4.2 Target Bank Returns

In all regression models the target ROAE and the relative ROAE have significant explanatory power as both variables are positively correlated to target CAR even with significance. This positive correlation implies that the returns to EME shareholders are higher if the target bank is more profitable on the absolute and relative level. Hence, target bank profitability seems to be a driver for a successful bank acquisition from target shareholders' view. With regards to cost efficient drivers, target CIR as well as relative CIR show no explanatory power to target CAR. Target CIR shows slightly negative values in Models I and III whereas the coefficient of relative CIR shows throughout positive values in all regressions. These inconsistent results permit no reasonable interpretation. However, Regressions I and III present a positive relationship between target CA-Ratio and target CAR at significance levels of 10% and 5%, respectively. The significances imply that transactions of less cost efficient banks influence the success of the M&A deals positively resulting in higher target CAR. The findings correspond to the results of Beitel et al. (2004). The coefficients of the relative CA, furthermore, display positive values with a significant one of Model IV. Comparing the findings with the ones of bidder returns, one can see that profitability and cost efficiency factors are more important when deals in target countries of EME are valued supporting previous empirical results analyzing cross-border M&A transactions occurring between two industrialized countries.

The respective coefficients of the relative asset size are significantly negative in all regression models. Therefore, the relative asset size of targets to bidders has explanatory power supporting empirical results by Hawawini & Swary (1990) and Zollo & Leshchinkskii

(2000). The results indicate that the acquisition and integration of smaller targets is less complex and the implementation of potential value creation is easier.

All regression models show no relationship between bidder M&A experience and target CAR. Although the coefficients have positive values, they are not statistically significant. Thus, the market does not account for bidder cross-border M&A experience, as target CAR are not positively influenced. Since there is no statistical significance, the "stake" variable gives no meaningful results either. However, its results partly contradict the assumption as some coefficients are negatively correlated to the target CAR. Target CAR might be negatively influenced if the bidder already holds stakes in the respective target. Deeper insight into the operations and financials of the targets, hence, are not advantageous and value creating.

Table 3.12: Determinants of the CAR to Targets

Estimated coefficients are determined using a multivariate regression of the CAR to targets in the 11-day event window [-5;+5][a] against a number of explanatory variables.[b]

CAR [-5;+5]; Estimation Period [t_{-120};t_{-20}]	*Model I*	*Model II*	*Model III*	*Model IV*	*Model V*
Constant	0,10770	0,11943	0,56083	0,49843	0,19128
Profitability and Cost Efficiency					
Target ROAE	0,00147 *	-	0,00243 ***	-	-
Target CIR	-0,00023	-	-0,00104	-	-
Target CA-Ratio	0,015395 *	-	0,02294 **	-	-
Relative ROAE	-	0,01675 *	-	0,02658 **	0,0187 **
Relative CIR	-	0,09739	-	0,04425	0,09105
Relative CA-Ratio	-	0,01778	-	0,03013 *	0,01461
Asset Size					
Relative asset size	-0,37295	-0,41008	-0,64471 *	-0,66232 *	-0,43035
Bidder Experience					
M&A expericence	0,04097	0,05395	0,04694	0,05258	0,04604
Stake	-0,02027	0,00419	-0,0137	0,02473	0,00835
Target Country Specific Factors					
Freedom of market	0,02013	0,0092	-	-	-
GDP growth	0,01767 ***	0,01458 **	-	-	0,01533 **
Rule of law	-	-	-0,06897	-0,10333 *	-0,04429
Inflation change	-	-	-0,01143 ***	-0,00899 **	-
Number of Observations	35	35	35	35	35
Adj. R^2	0,265 **	0,206 *	0,264 **	0,208 *	0,229 *

Source: Own calculations; Fitch IBCA Bankscope; Heritage Foundation 2009; United Nations Statistics Divisions; Kaufmann et al. (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 36 targets banks using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 3.3, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

The only variable showing no explanatory power regarding M&A success is freedom of market. Although freedom of market is positively related to target CAR, its coefficients are not statistically significant and have no meaningful impact to the returns to EME shareholders. Rule of law, on the other hand, displays only negative values with a significant coefficient

in Model IV implying that returns to EME shareholders are higher in countries with poorer governance. Moreover, the findings also suit the other factors, GDP growth and inflation change. Since GDP growth is positively related to target CAR, this implies that more developed countries augment the returns to EME shareholders. Considering the variable inflation change demonstrating highly significant negative value, it can be interpreted that economies with strong record for macroeconomic management – in terms of lower inflation – positively influence target CAR. Observing the three variables together, the study argues that developing countries with higher economic development and constant price stability as well as poor governance cause higher returns to target bank investors in the respective countries. To sum up, variables explaining cross-border M&A success of targets in EME are comparable to the ones of targets in developed countries.

3.5.4.3 Combined Entity Returns

Neither the target ROAE nor the relative ROAE have any explanatory power in the conducted regressions. Despite of the negative correlation of combined entity CAR (apart from Regression IV), they are not statistically significant. The findings coincide with the one of Beitel et al. (2004), who find insignificantly negative correlation between relative ROAE and combined entity CAR. Moreover, the other four variables (target CIR, relative CIR, target CA, and relative CA) also give no explanation for the success of M&A transactions. All these findings point out that the accounting-based factors do not play a predominant role evaluating M&A deals from the view of combined entities.

Demonstrating only positive coefficients, the variable asset size is not significant permitting any exact analysis. The slightly positive coefficients contradict the hypothesis that integration of smaller targets is less difficult resulting in faster value creation for the joint entity shareholders.

Equal to bidder CAR, bidder experience affects the results of combined entity shareholders positively. Combined entities profit from cross-border M&A experience of the bidder banks emptying into value-creating M&A transactions. Although the variable stake is positive in all regression models, it is again not significant. Consequently, deeper insight into the operations and financials of the targets is not advantageous whereas the cross-border M&A experience of the bidders have a positive effect on combined entity CAR.

All four variables do not show any explanatory power regarding cross-border M&A success. Although freedom of market, GDP growth, and rule of law present negative coefficients through all regression models arguing for higher combined entity returns in economies with little economic freedom, modest GDP growth and poorer governance, respectively, they

are not significant. Therefore, the study can give no evaluation which factor influences combined entity CAR positively resulting in higher returns for the joint shareholders.

A special remark to combined entity returns is necessary: The regression analyses clearly show the influence of bidder and target CAR. Some variables, which are significant for bidders but not significant for targets neutralize these effects resulting in insignificant value drivers for combined entities. The only significant factor to combined entity CAR is M&A experience of bidders, which is highly negative significant to bidder CAR outweighing the positive and insignificant coefficients of target CAR.

Table 3.13: Determinants of the CAR to Combined Entities

Estimated coefficients are determined using a multivariate regression of the CAR to combined entities in the 11-day event window [-5;+5][a] against a number of explanatory variables.[b]

CAR [-5;+5]; Estimation Period [t_{-120};t_{-20}]	*Model I*	*Model II*	*Model III*	*Model IV*	*Model V*
Constant	-0,05161	-0,03848	-0,05025	0,00259	-0,01024
Profitability and Cost Efficiency					
Target ROAE	-0,00007	-	-0,00016	-	-
Target CIR	0,00007	-	0,00012	-	-
Target CA-Rato	-0,00086	-	-0,0021	-	-
Relative ROAE	-	-0,00036	-	0,00001	-0,00034
Relative CIR	-	-0,01944	-	-0,02629	-0,02368
Relative CA-Ratio	-	-0,00095	-	-0,00105	-0,00131
Asset Size					
Relative asset size	0,04861	0,05708	0,03128	0,00581	0,01584
Bidder Experience					
M&A expericence	0,03593 ***	0,03817 ***	0,02803 **	0,03097 **	0,03159 ***
Stake	0,01287	0,01277	0,01353	0,01168	0,01181
Target Country Specific Factors					
Freedom of market	-0,00651	-0,00596	-	-	-
GDP growth	-0,0008	-0,00095	-	-	-0,00017
Rule of law	-	-	-0,01259	-0,01793	-0,0151
Inflation change	-	-	0,0007	-0,00031	-
Number of Observations	35	35	35	35	35
Adj. R^2	0,105	0,199 *	0,075	0,205 *	0,193 *

Source: Own calculations; Fitch IBCA Bankscope; Heritage Foundation 2009; United Nations Statistics Divisions; Kaufmann et al. (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 36 combined entities using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 3.3, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

3.6 Conclusion

The study builds up a sample of cross-border bank M&A transactions with change of corporate control between international acquiring banks and target banks in EME covering a total of 163 deals between 1994 and 2007. The transactions involve listed bidder banks from West-

ern Europe and North America and (non-) listed target banks in Asia, CEE, and LatAm. Constructing two data samples – the first covering all transactions and the second only accounting for listed bidders and listed targets – the study compares previous findings of cross-border M&A transactions among industrialized countries with international bank M&A deals initiated by banks located in industrialized countries expanding their business in EME. Hence, it contributes additional findings to the existing bank M&A literature by analyzing value effects associated with cross-border bank M&A deals and establishing value drivers of these transactions and EME conditions that aim to explain variation in returns. The analyzed CAAR show some consistency with US and European evidence. In general, acquiring bank shareholders receive no significant abnormal returns or wealth creation from cross-border M&A for the entire data sample. The sample only including listed target banks, however, demonstrates significantly negative abnormal returns to bidder banks. Target bank shareholder in EME, however, experience significant abnormal returns resulting in wealth creation. However, the analyzed positive returns are not as elevated as analyzed in previous studies. Moreover, the study implies that these cross-border M&A transactions are wealth destroying, as the joint abnormal returns are significantly negative opposing other empirical study presenting a positive net wealth effect of joint returns to bidders and targets (e.g., Beitel & Schiereck (2001); Hawawini & Swary (1990)).

In terms of variability across returns, differences can be explained by geography and nationality of bidder banks. Whereas value is created for bidder bank shareholders for deals involving LatAm banks (consistent for all transactions and for transactions accounting only for both listed bidders and targets), returns to shareholders at target banks are high in Asia and CEE. Similarly, value is created for Spanish bidder bank shareholders whereas target banks acquired by US, European (without Spanish and Italian ones), and Italian banks receive significantly positive abnormal returns. In addition, value for combined entity is only created in deals targeting LatAm banks and involving purchases by Spanish banks. The insignificant results to other combined entities assume a transfer of wealth from bidder banks to targets bank. Hence, on the net basis and from the economic point of view, value is not generated by cross-border bank M&A transaction in EME.

The regression models have reasonable explanatory power. Returns to bidder banks accounting for the entire sample of 163 transactions can be explained by asset size, deal-specific factors, bidder experience and economic condition expressed by GDP growth in EME. Larger targets, cross-border M&A experience of bidders, poor GDP growth influences bidder CAR positively, whereas listed targets have a negative impact. The identified variables of M&A success differ from the ones studies by previous analyses. Looking at bidder banks purchasing exclusively listed target banks in EME, the value drivers of bidder CAR alter: Al-

though bidder M&A experience and asset size has still a positive impact, GDP growth has no explanatory power anymore. However, freedom of market and rule of law as two other target country-specific factors have an influence on bidder CAR. Unfree economies with high regulation and poorer record on governance appear to command a risk premium for investors. In both samples, the factors of category 1 play no specific role what is different to target bank shareholders who receive a premium on their investment in more profitable and but less cost efficient targets. Moreover, smaller targets in contrast to bidders have a positive impact on target CAR. GDP growth, rule of law, and inflation change are additional drivers of target CAR: Returns to EME shareholders are associated with economies with promising financial development, inferior governance, and stronger stance on monetary policy. The returns to combined entities, on the other hand, are only positively influenced by the cross-border M&A experience of bidders. None of the other categories has a positive or negative impact on joint CAR.

The study quantifies the stock market perceptions regarding cross-border M&A transactions in EME from the different perspective of bidders, targets, and combined entities and compares them with previous studies. Regarding the information asymmetries linked with evaluating non-transparent banks in EME and uncertainties associated with investing in banks in unsecured financial systems, the outcomes are useful and clarified the particular value creation in EME and its related risks. Since more and more banks facing increasing competitive domestic markets, they presume future shareholder value in EME offering potentials for expansion and diversification. Consequently, bidder banks need a useful direction in which countries to invest partly given by the presented findings. However, the study limits its explanatory power, as abnormal returns are only short-term market assessments of expected returns from M&A transactions. Further studies are required to assure the market valuation of long-term bank performance following cross-border M&A transactions in EME. Moreover, it is reasonable to analyze and assess the consequences on the entire economy of emerging countries initiated by foreign banks holding the majority of domestic banking assets.

4 Study 2: Stock Price Impact of Large Blockholder Investments – Comparison of Sovereign Wealth Funds and Private Equity Funds

4.1 Introduction

SWF are not a new phenomenon. They have been managing actively and successfully the investment portfolios on behalf of governments that own the portfolios attracting only little attention for decades. Fueled by rising commodity prices and accumulating foreign currency reserves, however, SWF have emerged more and more as major international investors in the last years catching the intense interest and concerns of media, politics, and financial institutions. Especially their investment activities during the latest financial crisis lead to controversial feedback: Abu Dhabi Investment Authority (ADIA), for instance, acquired Citibank debt convertible into 4.9% of its common stock; Singapore's Government Investment Corp. (GIC) today is the largest shareholder of Swiss UBS. The list of SWF multi-billion dollar investments can easily be extended by various acquisitions in former US investment banks like Merrill Lynch or Morgan Stanley, whose capital was decimated by the meltdown in the US subprime mortgage market (Gilson & Milhaupt (2008)). The respective financial figures even underline their overwhelming financial firepower: The size of assets under management (AuM) has grown from USD 1.3 tr in 1997 to about USD 3.7 tr nowadays and is expected to reach a volume of USD 8 to 10 tr by the middle of this decade.[20] The size and rapid growth of state funds suggest that they are an important class of investors and will likely become even more significant in the future.

However, paradoxically to these facts, their structure, objectives, and investment strategies are poorly understood so far. They appear very similar to other internationally investment vehicles like pension funds or mutual funds which have been extensively examined by various financial researchers (e.g., Aggarwal, Klapper, & Wysocki (2005); Chen, Harford, & Li (2007); Del Guercio & Hawkins (1999); Li, Moshirian, Pham, & Zein (2006)). Actually, SWF seem to be most comparable in structure and expressed objectives to private equity funds. Like SWF, these funds are stand-alone, unregulated pools of capital, actively managed by investment professionals, and they often take large and long-term stakes in selected, publicly traded companies with the objective of profit maximization. Additionally, private equity

[20] Actual figures of SWF base upon the estimates of the Sovereign Wealth Fund Institute (http://www.swfinstitute.org). Historical and growth figures base upon the estimates of International Financial Services London (IFSL) research. SWF AuM are expected to rise in spite of the recent economic slowdown linked with the decline of oil prices and slump of global trade, which both serves as an engine of SWF growth (Maslakovic (2009)). Since the majority of funds do not disclose their volume, the respective figures derive from estimations. Hence, their specifications differ from each other depending on the relevant source.

funds have also gained in importance in the last decades. Their capital is raised primarily from institutional investor and their AuM have augmented from USD 53 bn in 1990 to USD 700 bn in 2008 and expect further growth in the future.[21]

Since both groups of investors are large shareholders and their investments in firms are often characterized by an acquisition of significant block of voting rights, SWF and private equity funds seem to be enabled to monitor management effectively in general. In line with this argumentation a number of studies analyzes the function of institutional investors assumed to have positive impact on shareholder value creation through efficient monitoring and shareholder activism (Shleifer & Vishny (1986)). However, the question arises whether SWF are able to play an equally active role in target's business as private equity funds are assumed to do in the light of numerous, severe restrictions on the monitoring and/or disciplinary role SWF face (Rose (2008)).

With regard to academic research, SWF investments are a relatively unexplored topic. The small number of existing working papers on sovereign funds documents significantly positive average abnormal returns around the announcement day of SWF acquiring equity stakes in publicly traded companies. This contradicts the concerns of being government-owned (Bortolotti, Fotak, Megginson, & Miracky (2009); Chhaochharia & Laeven (2009); Dewenter, Han, & Malatesta (2009); Knill, Lee, & Mauck (2009); Kotter & Lel (2008)). These market reactions on SWF targets are similar to the positive ones on private equity funds' targets enhancing shareholder value (e.g., Achleitner, Andres, Betzer, & Weir (2008); Cotter & Peck (2001); A. Klein & Zur (2009); Menke & Schiereck (2008); Mietzner & Schweizer (2007); Wright, Weir, & Burrows (2007)). Nonetheless, the origins of shareholder value creation appear to be different in most cases. Since the positive short-term reactions to private equity fund investments result mainly from large shareholder activism proven by a number of studies, researchers on SWF do not always succeed to verify a relation between the positive announcement effects around engagement and the ability of SWF managers to pursuit successful activism strategies. The researchers provide different explanations such as the increase in firms' financial stability especially in times of bad economic conditions (Chhaochharia & Laeven (2009)). Moreover, Bortolotti et al. (2009) also do not identify effective monitoring activities by SWF managers and document significantly negative long-run returns in the two year period after the SWF engagement suggesting these equity acquisitions are followed by deteriorating firm performance which is different to private equity funds' targets. Dewenter et al. (2009), on the other hand, analyze that SWFs are often active inves-

[21] Historical and growth figures of private equity funds base upon the estimates of McKinsey Global Institute (2007) and IFSL research (Maslakovic (2009)).

tors and that half of target firms undergo one or more events indicating SWF monitoring activity or influence.

Since both groups of institutional investors, SWF and private equity funds, seem to be comparable to each other, this study evaluates and compares SWF and private equity fund minority investments and their associated valuation effects on directly affected intra-industry rivals of targets. This study tries to fill a research gap by providing detailed empirical evidence using the example of listed financial services firms as this industry is targeted majoritarianly by state funds and SWF have announced active shareholding especially in this industry. Specific research questions should be answered: (1) What similarities and differences exist between the two groups of institutional investors on the basis of their respective targets? (2) Do their investments create elevated short-term shareholder value and what kinds of determinants influence the wealth creation? (3) Are both groups of investors active blockholders? (4) Do their investments created increased long-term shareholder value? (5) What different effects have investments of both investors on the intra-industry rival firms both short- and long-term?

For this purpose, 46 SWF and 68 private equity fund investments in financial services targets as well as 336 intra-industry rivals are identified between 1990 and 2009 (164 rivals to SWF targets and 172 rivals to private equity fund targets, respectively). By using a detailed and extensive dataset on SWF and private equity fund target firm, first, the investment patterns are examined exhibited by SWF and private equity funds. The study analyzes that SWF targets are larger than private equity fund targets with higher dividend payouts and yields, but with lower the managerial ownership suggesting shareholder activism potential of SWF. The results from an extensive matched sample of SWF targets and industry peers show that SWF targets are indeed much larger but not more profitable than their industry peers. Since the analyses cannot depict any improvements in operating performance of SWF targets, shareholder activism cannot be completely confirmed. Furthermore, the differences between private equity fund targets and their intra-industry rivals demonstrate that these investors purchase firms with shareholder activism potential as they pay lower dividends and display poorer PE-Ratios and minor managerial ownership. But again, private equity fund managers do not reach improvements in operating performance two years after the transactions contradicting active monitoring.

By applying the event study methodology, the study in a second step examines the stock market reactions to announcements of these investments and tests with cross-sectional regressions which variables have value-increasing or decreasing impact. Moreover, the valuation effects of listed rival firms, which are not targeted by sovereign and private equity funds, respectively, are also investigated. The study finds out that short-term market reactions to

SWF and private equity fund targets are significantly positive; surprisingly, the abnormal returns to SWF targets are higher compared to private equity fund targets. With regards to SWF investments, the analysis detects a positive relationship between the percentage of closely held shares and the market reaction supporting again study's assumption of active shareholder strategy. Consistent with the perception and previous studies that private equity funds are active and long-term orientated investors, the cross-sectional analysis confirms this assumption by, e.g., by positive relation between the percentage of closely held shares and the market reaction or the negative relation between EPS and valuation effects.

The rivals of both groups of institutional investors demonstrate two different results. Whereas the rivals of SWF targets react significantly positive to the announcements confirming the information signaling hypothesis, rivals of private equity fund target companies display negative CAAR proving the competitive hypothesis. SWF rival portfolio assesses that the transactions of SWF shed light on the quality and future potential of the financial services industry. As private equity funds are already known as active shareholders amplifying the operating performance of targets, rivals fear the consequence of being not competitive anymore as they could not increase the efficiency. Finally, the long-term impact on the acquisitions of the different ownership claims is examined, both on targets and on rivals. The results indicate that the long-lasting abnormal returns to SWF and private equity fund target firms are not different from zero for large holding periods consistent with the view of efficient markets, but contradicting the theory of active investing. The long-term abnormal returns to both rival portfolios, nonetheless, demonstrate positive values verifying the quality of the financial services industry in general. Regarding all results, the study analyzes that SWF investments in the financial services industry are comparable to private equity fund investments to some extent and that markets evaluate them positively with a slight proof of active shareholder and monitoring potential, which is assumed to improve the operating performance of their targets.

The remaining study is organized as follows. The next section gives information on SWF and private equity funds. The literature review in section 4.3 firstly describes large institutional blockholders and their impact on corporate governance and, secondly, the valuation effects of large blockholder investments on listed rival firms. The following section describes the applied methodology and variables and explains the data construction of the sample. In the penultimate section, three sets of results are presented: firstly, short-term abnormal stock returns; secondly, the regression analysis, and thirdly, long-term abnormal stock returns. The study is summarized with a concluding discussion in section 4.6.

4.2 Background on Institutional Investors

4.2.1 Sovereign Wealth Funds – From Stabilization to Wealth Preservation

Having a history of more than 50 years, SWF funds are not a new phenomenon. Only the expression "sovereign wealth funds" was created recently (Rozanov (2005)). In the past, they were named as stabilization funds, nonrenewable resource funds, trust funds, or with similar terms. Due to their heterogeneity reflected by these various earlier descriptions, there is no universally agreed definition of sovereign wealth funds, even though many suggestions have been made.[22] Regardless of their heterogeneity, most sovereign funds share the common origin of principal purpose to stabilize revenues. In reality, governments whose accumulation of excess revenues and reserves are dependent on the value of one underlying commodity have engaged in diversification of investments with the goal of stabilizing revenues and securing future liquidity needs. As a result, the majority of SWF can be found in oil exporting or otherwise commodity-rich countries symbolizing the first category of SWF. The second category of sovereign funds, the non-commodity SWF, originate from general budget or external surpluses as a result of substantial net exports (Kern (2007)).

As already stated, SWF have a long history with the first commodity funds established by Kuwait in 1953. It had the aim of investing surplus oil revenues to reduce the country's reliance on its finite oil resources. The number of SWF has grown steadily since then. The first SWF wave was in the 1970s as rising oil prices led to increase of oil export revenues. During 1980 and 2000, further SWF, both commodity and non-commodity originated, were launched. Since 2000, the SWF industry experienced expansion resulting in more than 50 nowadays-existing institutions with AuM of approximately USD 3.8 tr estimated by the SWF Institute (2009). As illustrated in Table 4.1, SWF assets are highly concentrated: The top ten funds account for about 80% of all AuM and approximately 70% of all fund assets are held by commodity exporting countries. Moreover, East Asia and the Middle East account almost for three quarters of all sovereign fund assets. Without doubt, SWF are large players among the new financial power brokers[23]. In comparison to other types of institutional investors, Maslakovic (2009) assesses that total sovereign fund assets are twice the aggregate size of the hedge fund industry's USD 1.7 tr AuM and much larger than private equity funds of USD 0.7 tr AuM. Yet, SWF are still relatively small in contrast to pension funds (USD 25 tr

[22] Compare, for example, the different definition of SWF suggested by Aizenman & Glick (2007), Kern (2007), Blundell-Wignall, Hu, & Yermo (2008b), and Fernandez & Eschweiler (2008).

[23] Other new financial power brokers are Asian central banks, hedge funds and private equity (Farrell & Lund (2007)).

AuM) and mutual funds (USD 22 tr AuM) and even smaller when considered in the context of the more than USD 160 tr in global financial assets.

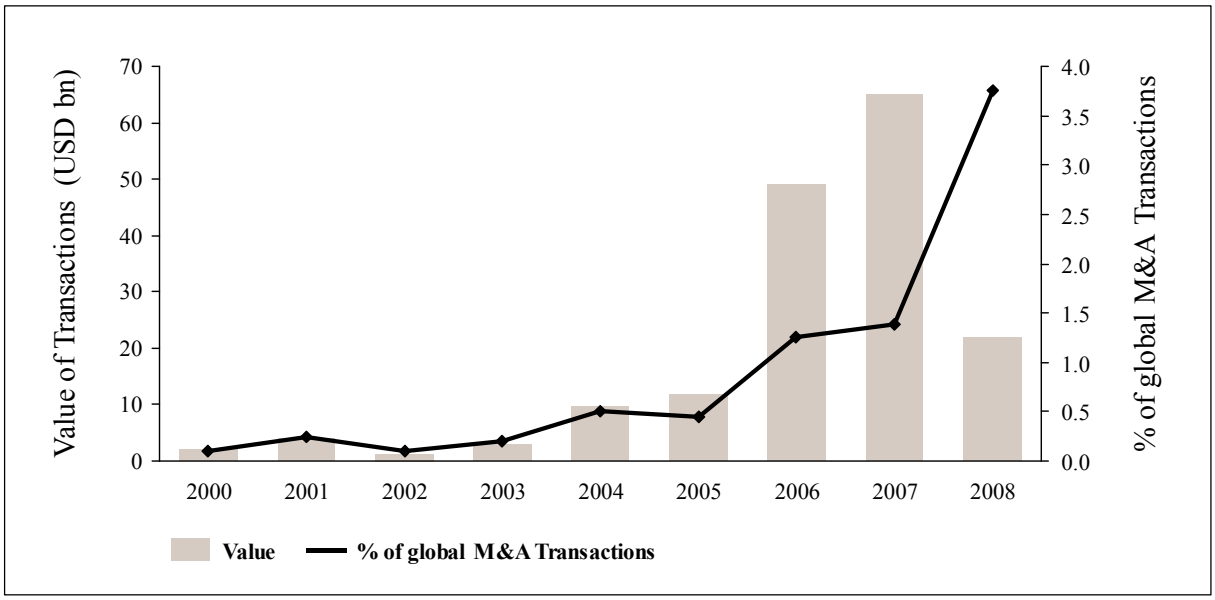
Table 4.1: Overview of Worldwide Sovereign Wealth Funds

#	*Region*	*Country*	*Fund Name*	*Origin*	*Assets in USD bn*	*Inception*
1	Middle East	UAE - Abu Dhabi	Abu Dhabi Investment Authority	Oil	627	1976
2	Developed countries	Norway	Government Pension Fund – Global	Oil	445	1990
3	Middle East	Saudi Arabia	SAMA Foreign Holdings	Oil	431	n.a.
4	East Asia	China	SAFE Investment Company	Non-Commodity	347,1	n.a.
5	East Asia	China	China Investment Corporation	Non-Commodity	288,8	2007
6	East Asia	Singapore	Government of Singapore Investment Corporation	Non-Commodity	247,5	1981
7	Middle East	Kuwait	Kuwait Investment Authority	Oil	202,8	1953
8	Other emerging markets	Russia	National Welfare Fund	Oil	168	2008
9	East Asia	China	National Social Security Fund	Non-commodity	146,5	2000
10	East Asia	China - Hong Kong	Hong Kong Monetary Authority Investment Portfolio	Non-Commodity	139,7	1993
11	East Asia	Singapore	Temasek Holdings	Non-Commodity	122	1974
12	Africa	Libya	Libyan Investment Authority	Oil	70	2006
13	Middle East	Qatar	Qatar Investment Authority	Oil	65	2005
14	Developed countries	Australia	Australian Future Fund	Non-Commodity	49,3	2004
15	Africa	Algeria	Revenue Regulation Fund	Oil	47	2000
16	Other emerging markets	Kazakhstan	Kazakhstan National Fund	Oil	38	2000
17	Developed countries	Ireland	National Pensions Reserve Fund	Non-Commodity	30,6	2001
18	East Asia	Brunei	Brunei Investment Agency	Oil	30	1983
19	Developed countries	France	Strategic Investment Fund	Non-Commodity	28	2008
20	East Asia	South Korea	Korea Investment Corporation	Non-Commodity	27	2005
21	Developed countries	US - Alaska	Alaska Permanent Fund	Oil	26,7	1976
22	East Asia	Malaysia	Khazanah Nasional	Non-Commodity	25	1993
23	Middle East	Iran	Oil Stabilisation Fund	Oil	23	1999
24	Other emerging markets	Chile	Social and Economic Stabilization Fund	Copper	21,8	1985
25	Middle East	UAE - Dubai	Investment Corporation of Dubai	Oil	19,6	2006
26	Middle East	UAE - Abu Dhabi	Mubadala Development Company	Oil	14,7	2002
27	Middle East	Bahrain	Mumtalakat Holding Company	Oil	14	2006
28	Middle East	UAE - Abu Dhabi	International Petroleum Investment Company	Oil	14	1984
29	Developed countries	Canada	Alberta's Heritage Fund	Oil	13,8	1976
30	Other emerging markets	Azerbaijan	State Oil Fund	Oil	13,4	1999
31	Developed countries	US - New Mexico	New Mexico State Investment Office Trust	Non-Commodity	12,9	1958
32	Developed countries	New Zealand	New Zealand Superannuation Fund	Non-Commodity	11,4	2003
33	Africa	Nigeria	Excess Crude Account	Oil	9,4	2004
34	Other emerging markets	Brazil	Sovereign Fund of Brazil	Non-commodity	8,6	2009
35	Middle East	Oman	State General Reserve Fund	Oil & Gas	8,2	1980
36	Africa	Botswana	Pula Fund	Diamonds & Minerals	6,9	1996
37	Middle East	Saudi Arabia	Public Investment Fund	Oil	5,3	2008
38	East Asia	China	China-Africa Development Fund	Non-Commodity	5	2007
39	East Asia	East Timor	Timor-Leste Petroleum Fund	Oil & Gas	5	2005
40	Developed countries	US - Wyoming	Permanent Wyoming Mineral Trust Fund	Minerals	3,6	1974
41	Africa	Trinidad & Tobago	Heritage and Stabilization Fund	Oil	2,9	2000
42	Middle East	UAE - Ras Al Khaimah	RAK Investment Authority	Oil	1,2	2005
43	Other emerging markets	Venezuela	FEM	Oil	0,8	1998
44	East Asia	Vietnam	State Capital Investment Corporation	Non-Commodity	0,1	2006
45	Other emerging markets	Kiribati	Revenue Equalization Reserve Fund	Phosphates	0,4	1956
46	East Asia	Indonesia	Government Investment Unit	Non-commodity	0,3	2006
47	Other emerging markets	Mauritania	National Fund for Hydrocarbon Reserves	Oil & Gas	0,3	2006
48	Middle East	UAE - Federal	Emirates Investment Authority	Oil	n.a.	2007
49	Middle East	Oman	Oman Investment Fund	Oil	n.a.	2006
50	Middle East	UAE - Abu Dhabi	Abu Dhabi Investment Council	Oil	n.a.	2007
51	Middle East	Oman	Oman Investment Fund	Oil	n.a.	2006
52	Middle East	U.A.E. - Dubai	Dubai World	Oil	n.a.	2006
			Total commodity funds		2328,8	
			Total non-commodity funds		1489,8	
			TOTAL		**3818,6**	

Note: Data as of December, 2009.
Source: Own illustration; SWF Institute (http://www.swfinstitute.org/funds.php).

Nevertheless, the very rapid accumulation of reserves in sovereign funds in the last decade caused by a combination of trends is impressive. The most relevant ones include booming oil prices, but also mounting prices for other raw materials caused by the steady rise of production and consumption often related to the fast economic growth of emerging countries (e.g., China India). Moreover, improved external trading positions and substantial current account surpluses in many emerging market countries financed by negative balance of payments of Western countries (especially of the US) accumulate large stockpiles of international reserves of East-Asian exporters. Many of these countries now hold more reserves than needed for prudential reasons (Aizenman & Glick (2007)). These enormous wealth transfers from most traditional industrial countries to a number of emerging market and developing countries are estimated to continue in the years to come and may change SWF relative future weight in global capital markets.

Figure 4.1: Overview of SWF M&A Volumes in USD bn



Source: Own illustration; Dealogic.

Recognizing that actual growth rates are going to be extremely sensitive to overall macroeconomic factors, in particular the oil price, Kern (2008) supposes that SWF assets will continue to grow around an average annual rate of 15% in the next years increasing global SWF assets to USD 4.7 tr by 2010 and almost to USD 10 tr by 2015. This massive growth of reserves, in turn, is linked to other trends. Compared to earlier behavior following a long-term, conservative investment strategy and investing foreign exchange surpluses in treasury notes and deposits in international banks of the industrialized world, SWF start to have a desire to seek higher returns looking for new investment options (Shediac & Samman (2009)). In addition to that, SWF cross-border investments are supported by alterations of the global financial system incorporating substantial elimination of restrictions on international capital

flows, increased global integration, technical innovation, recognition that diversification contributes to increased investment returns, and loss of "home bias" in investment decisions (Truman (2007)). Hence, this fast accumulation of reserves coupled with a swelling appetite for returns has led to a dramatic increase in the rate of acquisitions as shown in Figure 4.1.

Attributable to the actual volume of SWF assets, estimated future growth, and the ascending rate of equity stake purchases in Western companies, different concerns over the motives and operating style of SWF arise. Since governments control SWF, critics have been concerned that their investment strategies may be politically motivated and potentially conflict with the national interests of the countries in which they invest. Some industrialized countries question why they should privatize state-owned enterprises only to see them snapped up by foreign government entities. This so-called "state capitalism" may provoke financial protectionism in recipient countries having negative impact on the free flow of capital worldwide (Lyons (2007)). Moreover, the acquisitions of even partial ownership raise fears that SWF may not make investments with the commercial intention of maximizing returns but rather abuse such investments as cover for both political and industrial espionage or as an instrument of the sovereign government owner's geo-strategic interests. Especially the establishment of SWF by strategically important countries, such as China and Russia, are in the center of these worries and raise national security issues such as giving foreign government control or access to defense-related technologies (Fernandez & Eschweiler (2008)). In addition, since SWF are generally not subject to the disclosure standards that apply to regulated investors, the worry is that this lack of transparency leaves little insight of their motives and portfolios. This concern is amplified by the assumptions that SWF may have lower costs of capital than private sector competitors, or may have access to asymmetric information and intelligence leading to a distortion of competition (Miracky, Dyer, Fisher, Goldner, Lagarde, & Piedrahita (2008)). All these fears and concerns were even stoked by SWF high-profile investments in developed countries' financial institutions during the credit crunch of 2007 and 2008 raising unease about the desirability of these investments.

Regrettably, the recent debate on SWF investments pays much less attention to the benefits of their investments and the constructive role that SWF can play. In the long-term, interlocking, cross-border investments contribute to international peace and stability. Especially, in times of recent financial turmoil, SWF contributed needed liquidity when investment targets, in particular financial institutions, were facing considerable distress and alternative sources of funding and capitalization were sparse. SWF behave as constructive and responsible market participants making an important contribution to the global financial system. Moreover, financial stability has been identified as a central policy issues to SWF. Sovereign funds are financial investors whose liquidity and solvency have to be managed prudently in

order to meet their objectives of long-term profitability. Hence, SWF investments can have of stabilizing impact on firm's share price. Moreover, as government-owned investment vehicle, SWF are unlikely to engage in speculative activities and largely devoid of highly leveraged positions and stringent capital requirements. Instead, risk management will be high on their agenda and be reflected in well-diversified portfolios. Combined with their higher return targets, this means that SWF are likely to be stable providers of long-term risk capital. Indeed, SWF have not been seen following the mainstream and compounding volatility in the current market crisis. Therefore, SWF are rather anchor investors with stabilizing effects in times of elevated uncertainty, strengthening the capital base of the targets and providing stable long-term risk capital and important positive signals to other investors. Moreover, as long-term investors, they inject further needed capital in time of crisis (Kern (2008)).

Although the concerns of recipient countries are comprehensible, due to their well-performing track record and long-term investment outlook, SWF can be perceived as a value-investing shareholder equally comparable to other types of institutional investors, especially to private equity funds. Attributable to the recent experience of substantial declines in their investment valuation but their still vast pool of assets, sovereign funds are predicted to be important participants in shaping the future of global finance, become more active and exert more influence on target's strategy and corporate policy to optimize their returns.[24]

4.2.2 Private Equity Funds – Significant Market for Corporate Finance

Private equity funds are composed of two main types of investments: leveraged buyout (LBO) and venture capital (VC). The first and main type of private equity, LBO, which is in the center of attention in this analysis, usually purchases stakes of mature companies with steady free cash flows.[25] These cash flows are essential for the repayment of debt, which has been used for the acquisition. To amplify the economic value of the acquired companies, they are often restructured or strategically repositioned. Then, after certain holding period, target firms will be sold by the private equity fund. The other category of private equity funds, VC, invests in companies that are in the first phase of their life cycle and often do not generate profit or even sales yet. In contrast to buyout funds emphasizing more on active management of their portfolio companies, VC funds manage them less actively (Kaplan & Strömberg (2009); Phalippou (2007)).

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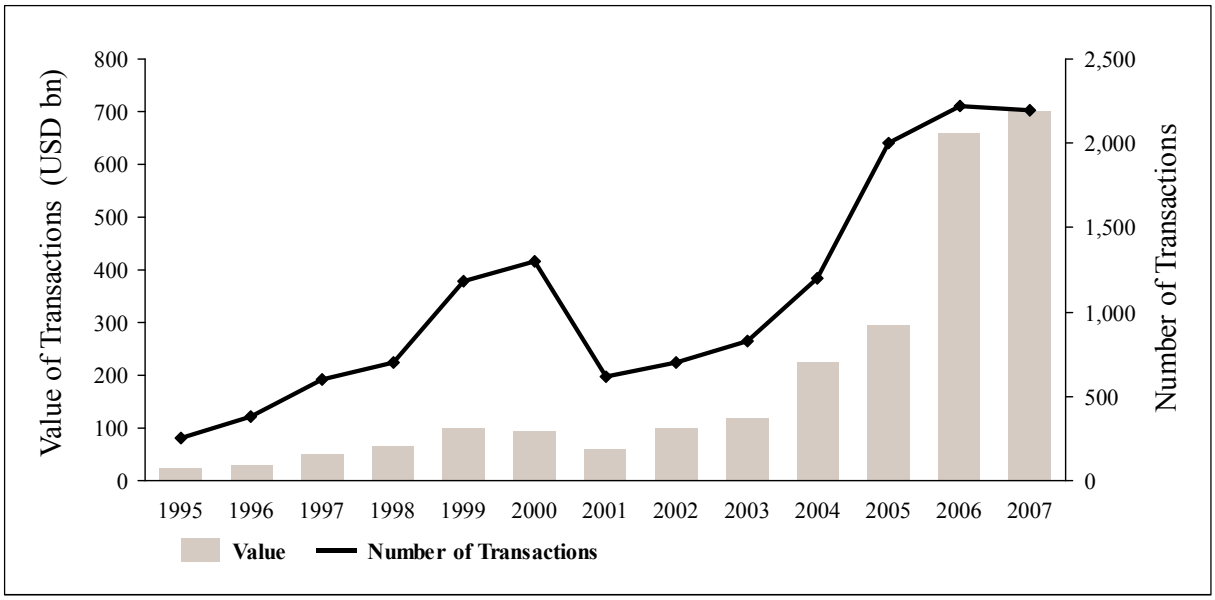
[24] According to the latest report on SWF issues by State Street in 2009 (Hoguet, Nugée, & Rozanov (2009)), exceptional events within the financial market have significantly changed the way these funds perceive their own role as very large institutional investors. Sovereign funds are assumed to become more active in the near future. The first funds pronouncing this intention of taking an active role within its investment is Temasek.

[25] The terms private equity and leveraged buyout are used interchangeably in this paper.

Turning the attention on the origins of private equity, this industry has a relatively long history similar to SWF. The roots of private equity as institutional investors date back to the time after World War II. At that time, the first investment companies were established in the UK and the US (Leopold, Frommann, & Kühr (2003)). Since the origins of the private equity industry, four major epochs have taken place marked by three boom and bust cycles. The early history of private equity, from 1946 and 1981, was characterized by relatively small volumes of private equity investments, rudimentary firm organizations and limited awareness of and familiarity with the private equity industry. The introduction of the limited partnership construction and the regulatory changes for banks and pension funds characterized the first boom and bust cycle from 1982 through 1993. Large institutional investors adopted the role of private individuals in investing in private equity (Tolkamp (2007)). The industry became generally known when large takeovers were executed by private equity funds. Moreover, this period was also shaped by the remarkable increase in leveraged buyout activity financed by junk bonds before the near collapse of this industry in the late 1980s and early 1990s as the junk bonds market crashed (Kaplan & Strömberg (2009)). In 1992, the second cycle appeared from the latest savings and loan crisis, the real estate market collapse, the insider trading scandals, and the recession of the early 1990s. The period witnessed the emergence of more institutionalized private equity firms, ultimately culminating in the massive Dot-com bubble in 1999 and 2000. After the burst of the internet-bubble, the private equity industry experienced a few hard years. However, the industry has showed its resilience, mostly based on global macro economic growth. Due to the combination of decreasing interest rates, loosening lending standards and regulatory changes for publicly traded companies, the third and latest cycle (from 2003 through 2007) was the golden age of private equity. Leveraged buyouts reach unparalleled size and the institutionalization of private equity firms is exemplified by the Blackstone Group's 2007 initial public offering (Krantz (2006)).

Today, the private equity industry is considered an important asset class managing approximately USD 700 bn of capital and therefore symbolizes the fastest growing market for corporate finance and restructuring over the last two decades (Fenn, Liang, & Prowse (1997)). LBO funds manage about two-third of the private equity funds capital. Because LBO funds use high leverage ratios, their economic impact is even greater than these figures suggest and the investment size can be multiplied by three or four times base capital (Phalippou (2007)). As seen in Figure 4.2, global leveraged buyout investment has seen considerable expansion in the last few years: From 1995 to 2007, the deal volume has grown by approximately 30% on average. Generally speaking, private equity funds play more and more an important role as financial intermediaries additionally to their significant day-to-day active participation as board members and advisors (Metrick & Yasuda (2009)).

Figure 4.2: Global Leveraged Buyout Volumes in USD bn



Source: Own illustration; Dealogic.

The reason why private equity funds need to be successfully active shareholders and increase the financial and operating performance of the acquired companies lies within the compensation structure of private equity funds and their managers: Managers charge an yearly management fee of 2% with carried interest of 20% and a hurdle rate of 8% (Beauchamp (2006); Metrick & Yasuda (2009); Phalippou & Gottschalg (2009)).[26]

By considering the respective life cycle of private equity funds, the interaction between manager compensation and shareholder activism becomes even clearer. The first stage is fundraising and seeking new capital from outside investors. Therefore, investors or limited partners (LP) sign a legal agreement with the general partner (GP) obligating them to provide a certain amount of cash. The GP, on the other hand, is responsible to manage the fund on a daily basis, including investment decisions. Nonetheless, after the capital commitment, it is not necessarily transferred immediately to the fund. The cumulative capital calls equal zero at the time. In the second step, the GP looks initially for investment opportunities in target companies. At this point in time, the fund is not yet generating profits, but it is charging annual management fees reflecting the first capital calls of the fund. As soon as the fund begins to invest in selected firms, some of the committed capital is called. The third and last step is the exit of the private equity fund by divesting their stakes of portfolio companies and distributing returns to investors. This process of generating negative revenues in the beginning and high expected returns from successful exits at fund end, is well known as private equity's "J-

[26] The carry interest is a high incentive for private equity managers and reflects the lion's share of their compensation. In good years, it can be above USD 100 m.

curve"[27]. As the private equity funds' carried interest is only calculated on these realized gains at the end, the expected returns need to exceed the hurdle rate in order that managers receive their respective compensations. Otherwise, if private equity funds do not surpass the hurdle rate, they do not generate profits and consequently, the managers earn only their annual fees. Hence, private equity managers are assumed to have the skills and preference to become active in their portfolio companies and increase operating performance.

As private equity funds are the group of institutional investors, which are mostly comparable to SWF, the impact of SWF shareholder activism on targets' performance is expected to be similar to ordinary private equity engagements, although there are concerns that SWF could have potentially more politically driven motivations for their investments.

4.3 Literature Review

4.3.1 Large Institutional Blockholders and Corporate Governance

While there is only limited academic research addressing the impact of SWFs on corporate governance and shareholder value, there is a large body of research focusing on the effect of large institutional shareholders on the latter. In spite of being government-owned, the similarity to private equity investors seems most suitable given that both sovereign and private equity fund assets are invested over a long horizon and their investments are made in a limited number of carefully selected target companies managed by experienced professionals with the objective of profit maximization.

Monitoring hypothesis

Regarded as long-term and large shareholders, SWF and private equity funds are predicted to have a positive impact on firm profitability based on the agency-theoretical background provided by Jensen (1986) and Shleifer & Vishny (1986). According to them, large blockholders often use the relationship between shareholder size and corporate governance and thus, enhance shareholder value due to a reduction of agency costs. This fact leads to the first hypothesis, the so-called monitoring hypothesis, suggesting that small shareholders lack incentives to monitor managerial performance leading to a free-rider problem. The presence of large shareholders, however, partly solves this problem and improves monitoring as they are predicted to have much stronger monitoring incentives and hence, amplify the equity value of

[27] The J-curve phenomenon was firstly introduced by Magee (1973). Since then, a large number of studies have applied it to various industries.

companies through an increase of target firm's management efficiency and future performance. Supporting the monitoring hypothesis, Barclay & Holderness (1991) and Holderness & Sheehan (1985), for example, find that stock purchases of large shareholders are typically followed by abnormal stock price appreciations and also increased management turnover for both purchases by "corporate raiders" and negotiated block trades, respectively, due to their active involvement in target firms' business.

Nevertheless, large institutional investors do not only have beneficial impacts on corporate governance but they may cause costs. Theoretical arguments focus on two main sources of costs. A first problem symbolizes the risk that large shareholders force the company to act in their own interest and expropriate resources from the firm at the expense of other (minority) investors, employees or managers (La Porta, Lopez-de-Silanes, Shleifer, & Vishny (2002)). The theory regarding conflicts of interest and the related agency costs relates to Jensen & Meckling (1976). Secondly, institutional shareholders may reduce firm performance either because they do not have adequate monitoring skills or because their objectives conflict with shareholder value maximization preventing active monitoring (e.g., Chen et al. (2007); Demsetz & Lehn (1985); Gillan & Starks (2000)).

Applying the monitoring hypothesis with its related costs to private equity funds, the engagement of private equity managers in target company's day-to-day business is an essential part of their investment strategy. This engagement is even underlined by the fact that private equity funds invest only in selected target companies. As a result, private equity funds have a higher probability becoming active investors, and this activism seems to have value implications. After private equity investors have purchased a large stake in a target company, an improvement in management capabilities is often detected. These target firms characteristically undergo certain changes such as divestments of non-core assets, improvement of efficiency, decline in working capital, increase in research and development expenditures, optimization of cash flows, and decline in capital expenditures (Muscarella & Vetsuypens (1990)) leading to improved operating profits at the engagement period. Cotter & Peck (2001) and Wright & Robbie (1998), for instance, examine that private equity firms provide a degree of expertise to target company's management that will result in more active monitoring. In addition, private equity investors have been shown to improve post-buyout performance which indicates more effective monitoring (e.g., Hogan, Olson, & Richard J. Kish (2001); Kaplan (1989); Kaplan & Stein (1993)). This activism also has value implications as previous evidence on the engagement of private equity investors as blockholders indicates that target firm shareholders receive substantial positive stock price adjustments in response to the acquisition announcement (e.g., Achleitner et al. (2008); A. Klein & Zur (2009)). Moreover, Mietzner &

Schweizer (2007) document that private equity investors enhance shareholder value due to a reduction of agency costs.

With regard to state funds' investments, the empirical studies on SWF investments also detect positively stock price reactions around announcement days. However, one analysis demonstrates that the investments do not significantly affect target firm growth, profitability or governance in the three years following the investment (Kotter & Lel (2008)) whereas another even finds negatively long-term returns of SWF investment targets (Bortolotti et al. (2009)). Moreover, the study of Dewenter et al. (2009) analyzes the impact of SWF investments on the values of the companies in which they invest and provide evidence consistent with the tradeoff between the monitoring and lobbying benefits versus tunneling and expropriation costs of SWFs as blockholders. Moreover, the researchers find that SWFs are often active investors. Slightly more than half of the target firms experience one or more events indicative of SWF monitoring activity or influence.

Undervaluation hypothesis

The second hypothesis that may explain the source of value creation to shareholders is the undervaluation hypothesis. This theory assumes that block purchases are generally attempted by investors who possess either private information about the company and its intrinsic value or superior security analysis skills enabling them to ascertain that target firm's shares are temporarily undervalued (Choi (1991)). One of the potential sources for undervaluation is financial invisibility occurring when listed firms are small and do not experience sufficient coverage in the financial press or from financial analysts in contrast to larger, listed ones. Therefore, the main reason for companies going private is the stock market undervaluation supported by empirical evidence, for instance, from Andres, Betzer, & Weir (2007) or Maupin, Bidwell, & Ortegren (1984). This invisibility aggravates the trouble of getting accurate information to the market about the company's performance, which amplifies the thin trading of its shares. As a result, the management observes that the stock market does not provide an accurate fundamental valuation of the firm. Therefore, if there is no other evidence of other potential buyers, managers will welcome the share purchase of private equity investors or SWF sending a positive sign at the market.

Moreover, undervaluation makes companies particularly attractive to private equity funds because they can bring their expertise to improve the performance of the company. Weir, Wright, & Scholes (2008), for instance, analyze that private equity funds – attributable to their well-qualified managers and their expertise – are able to identify undervalued firms, which suggests that they have private information about the company and its true value. Since

SWF are government-owned investment vehicles, they are thought to have also exclusive access to private information, especially if the information flows freely between them and government's agencies. Hence, SWF managers would know about alterations in government actions or regulations having an effect on firm values before their private sector investment management counterparts. This would enable SWF to buy before good news and to sell before bad news is available to private investors. Nonetheless, the robust empirical validation of this hypothesis is rather difficult given the methodological problems to identify exactly a state of temporary undervaluation (Holderness & Sheehan (1985); Shome & Singh (1995)).

Certification hypothesis

Finally, the certification hypothesis is supposed to influence target's stock price positively. It arises from the expanding literature on reputational signaling, most notably the study by B. Klein & Leffler (1981). The researchers demonstrate the circumstances under which a non-salvageable capital expenditure can serve as a successful connection to guarantee the quality of a firm's products. Customers recognize this kind of investments as a commitment to product quality. Their willingness to pay a premium over product cost for the commitment provides a stream of quasi-rents on the initial investment, which will only persist to be paid as long as the firm does not cheat. Their reputational capital reasoning is extended to several studies about financial markets. One of the most important works is the study by Booth & Smith II (1986), who model the certification role provided by investment bankers to reduce information asymmetry in new equity offerings. Beatty & Ritter (1986), Carter & Manaster (1990), J. Johnson & Miller (1988), and Titman & Trueman (1986) examine how auditors and underwriter help resolve the asymmetric information inherent in the initial public offering (IPO) process. Megginson & Weiss (1991) find that the initial return to venture-capital-backed IPOs is lower than that of non-venture-capital-backed IPOs. They suggest that the presence of large block shareholders may provide a complement to underwriter reputation in reducing IPO uncertainty. Hertzel & Smith II (1993) use certification as the motivation for private placements and analyze that private placement discounts are strongly related to their proxies for information cost. Informed investors put their stamp of approval on the market's valuation of the firm by agreeing to purchase a large block of stock. By increasing stock prices, hence, buyers are compensated for information production and value certification.

Applying the previous empirical evidence to SWF and private equity investors, it can be assumed that their investments certify the quality of targets and their respective future positive cash flows. Since both institutional investors have superior analysis skills, they are enabled to identify valuable targets. Moreover, they are assumed to possess private information about the targets. All the mentioned factors may signal to the market that the target is a valuable investment certified by the actions of SWF and private equity funds.

Based on the three hypotheses and previous empirical studies, the study theorizes positive short-term valuation effects on listed financial services targets of SWF and private equity funds. Hereby, it is predicted that the monitoring hypothesis is confirmed as it emphasizes extensively the assumed activities of SWF and private equity funds. In the long-run, it is assumed that positive abnormal returns for private equity targets generated by active monitoring. Although previous studies according to long-term effects for SWF targets are not conclusive or even negative, the study expects positive long-term effects on SWF targets through shareholder activism as the study focus on the financial services industry targeted majoritarianly by SWF. As the experiences of SWF management in this industry are most evolved, it is predicted them to be value-increasing. Moreover, the study presumes that the positive valuation effects on private equity targets are more profound compared to SWF targets due to the fact that private equity investors are known to be even more active as SWF and that the latter are supposed getting more active only recently.[28]

4.3.2 Valuation Effects of Large Blockholder Investments on Listed Rival Intra-Industry Firms

SWF and private equity investors generate the overwhelming part of their profits when they divest their stakes. This profit structure motivates them to increase target firms' profitability and equity value as already addressed shortly in the previous chapter. Against this background, the engagements of these blockholders are assumed to affect not only target companies and their industry wide competition, but they also might have an effect on the respective industry as a whole. Therefore, announcements of this particular change in ownership structure should generate market valuation effects on industry rival firms. The assumptions find theoretical foundations through two hypotheses explained briefly in the following.

Information signaling hypothesis

Unlike inter-firm M&A transactions, acquisitions of stakes by outside blockholders do not involve consolidation of separate operating firms. Therefore, changes in the value of rival companies induced by new blockholders are neither due to the effect of increased market power (or collusion) nor to the demonstration of synergies associated with a consolidation of operating firms as firstly proposed by Eckbo (1983) or Stillman (1983). The valuation effects on rivals are rather explained by the so-called information signaling hypothesis asserting that

[28] According to the newest report on SWF issues by State Street in 2009 (Hoguet et al. (2009)), exceptional events within the financial market have significantly changed the way these funds perceive their own role as very large institutional investors. Sovereign funds are assumed to become more active in the near future. The first funds pronouncing this intention of taking an active role within its investment is Temasek.

large bidding shareholders possess private, valuable information about targets. It argues that if the financial market perceives the elements of this private information rather industry-wide than firm-specific, the value of the target firm's horizontal rivals should change in response to the announcement of ownership structure change. Applying this hypothesis in going-private transactions, Slovin, Sushka, & Bendeck (1991) analyze that these bids generate significantly positive valuation effects for industry rivals of target firms. They find that these announcements generate statistically significant positive intra-industry effects with a two-day average excess return of +1.3%. In this regard, the researchers identify three potential factors determining these positive returns. First, bids of new large blockholders may disclose private information about expected future cash flows in the respective industry; secondly, rivals may be more likely to turn into targets of future bids; and thirdly, the market may recognize the agency problem as industry-wide and force rival firm managements to improve company's performance to avoid becoming the next target.

Competitive hypothesis

In contrast to the above statements, the competitive hypothesis supposes that acquisitions of SWF and private equity funds may have an adverse effect on target firm rivals' future performance supported by two main factors. First, if these new blockholders obtain a sufficient level of voting power in a target company, they often seek to change the board of directors and force management to pursue strategic alternatives (A. Klein & Zur (2009)). Secondly, by changing target firm's objective functions toward higher shareholder wealth, the way in which companies compete may change significantly (e.g., F. Allen, Carletti, & Marquez (2008); Boyson & Mooradian (2007)) leading to a more competitive environment and distinct consequences for peers. Target firm managers extending their current market share in the respective industry and/or improving firm efficiency adversely affect rivals reducing their profits as it becomes more difficult for them to maintain their level of performance. As a result, large blockholder investments can result in negative excess returns for rival firms.

The recent study of Mietzner & Schweizer (2008) tests the two hypotheses by investigating the valuation effects of industry rivals to firms targeted by hedge funds and private equity investors. The short-term market reactions to private equity target rivals are substantially positive confirming the information signaling hypothesis. Considering long-run returns, private equity portfolio experiences negative results on average being in line with the competitive hypothesis. Since the study is analyzing SWF and private equity investments in the financial services industry supposing comparability between these two groups of institutional investors, the study supposes that valuation effect on rivals are positive in the short-term and

negative in the long-term supporting, on the one hand the information signaling and on the other hand the competitive hypothesis.

4.4 Data Sample and Methodology

4.4.1 Sample Construction

For the analysis, it is needed to construct four different data panels composed of SWF and private equity fund financial services industry targets and their respective intra-industry rival companies. Therefore, the study reverts to three primary databases: (1) Thomson Financial SDC database provides the analyzed M&A transactions; (2) Thomson Financial DataStream offers time series data, i.e., daily closing prices[29] for all firms and country industry index; and (3) Thomson Financial Worldscope delivers accounting data.

4.4.1.1 Indentifying SWF Financial Services Industry Targets

The sample of relevant SWF mergers and acquisitions in the international financial services industry is drawn from the Thomson Financial Mergers and Acquisition database. It includes SWF transactions announced between January 1st, 1990 and August 31st, 2009 indicated by the SWF involvement flag. In a second step, all SWF names specified in Balding (2008), Bortolotti et al. (2009), Kern (2007), and Truman (2008) dedicated websites are assembled.[30] Afterwards, the announcement days are extracted for all transactions conducted by the relevant SWF from the database and the two samples are matched. The total number of SWF deals is reduced to yield only those transactions meeting the following criteria:

- Transactions have been closed – the deal status hence is "completed".
- SWF hold 50% or less of the total shares of the target company after acquisition – Thus, no change of corporate control.
- Only transactions with target primary SIC codes between 6000 and 6999 representing the financial services industry are considered.

[29] To reflect the influence of dividend payments as well as share issuances or repurchases on return data, the adjusted stock prices denoted by date type "RI" were selected.

[30] Like Bortolotti et al. (2009) the study employs the http://www.swfinstitute.org website to identify fund names and obtain suggestions for additions, deletions and transaction information.

- All SIC codes, which are related to the real estate and insurance sector, are eliminated.[31]

Since SWF can make use of special purpose vehicles (SPV), which might not be cited in public sources, the ultimate parent CUSIP for each state fund is identified. All transactions associated with the ultimate parent CUSIP are extracted again from the Thomson Financial Mergers and Acquisition database. After searching LexisNexis, this sample is matched with the sample described above in order to obtain suggestions for additions, deletions, and transaction information.

The described selection criteria and steps result in a final sample of 46 SWF transactions in the international financial services industry between November 1st, 1996 and January 31st, 2009, whose historical stock prices are available in DataStream for the upcoming analysis. Table 4.2 provides an overview of the frequency distribution over time and reveals a strong concentration of events between the years 2005 and 2008.

Table 4.2: Overview of SWF Transaction Sample – Descriptive Statistics

Year	*Transactions*	*%*	*Average value (USD m)*	*Acquirer Region - Number of Transactions*				
				Africa	*Asia*	*Australia*	*Europe*	*North America*
1996	1	2,2	122,8			1		
1997	1	2,2	n.a.		1			
1998	3	6,5	1.652,4		2		1	
1999	1	2,2	10,7		1			
2002	2	4,3	35,7		2			
2003	2	4,3	n.a.		2			
2004	2	4,3	n.a.		2			
2005	4	8,7	672,0		4			
2006	4	8,7	409,6		2		2	
2007	18	39,1	3.166,8	1	6		7	4
2008	7	15,2	2.645,5				4	3
2009[a]	1	2,2	70,5		1			
Total	46	100,0	1.888,4	1	23	1	14	7

Source: Own illustration; Thomson Financial SDC.
[a] Only one month has been considered.

[31] Specifically, all transactions with SIC codes for life insurance (6311), accident and health insurance (6321), hospital and medical service plans (6324), fire, marine and casualty insurance (6331), surety insurance (6351), title insurance (6361), insurance carriers (6399), insurance agents, brokers and service (6411), real estate operators and lessors (6510), operators of nonresidential buildings (6512) and apartment buildings (6513), lessors of real property (6519), real estate agents and managers (6531), real estate dealers (6532), land subdividers and developers, except cemeteries (6552), and real estate investment trusts (6798) are excluded.

The average transaction value ranges from USD 10.7 m to USD 3,166.8 m, whereas the later is mainly driven by the acquisitions of the Swiss UBS (USD 9.8 bn) and the US banks Citigroup (USD 7.5 bn), Merrill Lynch (USD 4.4 bn), and Morgan Stanley (USD 5.0 bn). Furthermore, the transaction of UBS represents the largest transaction volume in the sample. Moreover, although Asian financial services companies are targeted more frequently than North American targets (23 deals vs. 7 deals), the invested amount of USD in North America is higher than in Asia reflecting once again the latest liquidity injection of SWF to the crisis shaken US financial services industry.

4.4.1.2 Indentifying Private Equity Financial Services Industry Targets

Similar to the identification of SWF targets, the Thomson Financial Mergers and Acquisition database provides the transaction information for private equity funds' target companies over a period from January 1st, 1990 to August 31st, 2009. The total number of private equity fund deals is reduced to yield only those transactions meeting the following criteria.

- Transactions with acquirer primary SIC codes between 6000 and 6999 representing the financial services industry are extracted.
- Acquirers from the banking or insurance industry are excluded.
- Acquirers must be a private equity fund or an appropriate SPV, i.e., a company fully controlled by a private equity fund with an objective to purchase another company.
- Transactions have been closed – the deal status hence is "completed".
- Private equity funds hold 50% or less of the total shares of the target company after acquisition – Thus, no change of corporate control.
- Only transactions with target primary SIC codes between 6000 and 6999 representing the financial services industry are considered.
- All SIC codes, which are related to the real estate and insurance sector, are eliminated.[32]

[32] Specifically, all transactions with SIC codes for life insurance (6311), accident and health insurance (6321), hospital and medical service plans (6324), fire, marine and casualty insurance (6331), surety insurance (6351), title insurance (6361), insurance carriers (6399), insurance agents, brokers and service (6411), real estate operators and lessors (6510), operators of nonresidential buildings (6512) and apartment buildings (6513), lessors of real property (6519), real estate agents and managers (6531), real estate dealers (6532), land subdividers and developers, except cemeteries (6552), and real estate investment trusts (6798) are excluded.

Compared to SWF, SPV of private equity funds are not always classified with 6000-6999 SIC codes. Consequently, the deal synopsis is searched for private equity funds that own a SPV, or for terms like LBO to classify a transaction as a private equity deal. The purchases of subsidiaries of publicly listed companies are included as the analysis predicts that the reaction of the market to the announcement of selling the business unit to a private equity investor also affect the parent company. The sample is validated by conducting a search on LexisNexis for additions, deletions, and transaction information.

After the execution of the explained selection criteria and steps, the study is left with a final sample of 68 private equity funds' deals within the financial services industry between October 1st, 1990 and June 30th, 2009, whose historical stock prices are available in DataStream for the upcoming analysis. Table 4.3 gives a summary of the recognized transactions.

Table 4.3: Overview of Private Equity Fund Transaction Sample – Descriptive Statistics

Year	*Transactions*	*%*	*Average value (USD m)*	*Acquirer Region - Number of Transactions*					
				Africa	*Asia*	*Australia*	*Europe*	*Latin America*	*North America*
1990[a]	1	1,5	19,7				1		
1992	1	1,5	6,9						1
1993	1	1,5	n.a.				1		
1994	1	1,5	n.a.				1		
1995	2	2,9	92,8			1	1		
1996	1	1,5	n.a.				1		
1997	2	2,9	11,5			1	1		
1998	3	4,4	328,8				1	2	
1999	5	7,4	124,4				3	1	1
2000	5	7,4	337,4				4		1
2001	3	4,4	197,4				2		1
2002	2	2,9	11,1	1	1				
2003	1	1,5	1,3			1			
2004	5	7,4	61,1		1	1	2		1
2005	8	11,8	53,1		5	1	1	1	
2006	8	11,8	416,5	1	5	1	1		
2007	7	10,3	408,4	1	2	1	3		
2008	10	14,7	907,8		1		4		5
2009[b]	2	2,9	114,5						2
Total	68	100,0	298,5	3	15	7	27	4	12

Source: Own illustration; Thomson Financial SDC.
[a] Only three months have been considered.
[b] Only six months have been considered.

The average transaction value ranges from USD 1.3 m to USD 907.8 m, whereas the later is mainly driven by the acquisitions of the US bank Washington Mutual (USD 2.0 bn)

and asset manager Legg Mason (USD 1.3 bn). The first transaction represents the largest transaction volume in the whole transaction sample. Moreover, European financial services companies are in the center of attention of private equity funds with 27 minority stake purchases followed by Asian targets (15 deals). Nonetheless, similar to SWF transactions, the deals in North America represent the ones with the highest deal value. The average deal volume of private equity funds is significantly smaller compared to the mean volume of SWF (USD 298.5 m vs. USD 1,888.4 m) symbolizing the sheer financial firepower of SWF.

4.4.1.3 Indentifying Intra-industry Rivals

After the identification of the transactions concerning SWF and private equity fund targets, the respective rival portfolios are constructed. In a first step, the study creates these portfolios by identifying all firms listed on each country's major stock exchange(s) during the sample period with the same three-digit INDG industrial classification code and matching them with the relevant SWF and private equity fund target firms. In an ideal world, the study would classify a rival portfolio sample for each company based on country, industry, size[33] and market-to-book ratio. Since some acquisitions by SWF and private equity funds occur in less developed capital markets, however, some targets have only an unsatisfying amount of potential rivals accessible. After considering the reduction of the sample comprising only companies of mature and large economies in order to insure a sufficient number of rivals within the matching portfolios, it is decided to form the rival portfolios based only on country and industry affiliation. Otherwise, this would result in a deduction of a significant part of the samples. Moreover, rivals that themselves became targets over the sample period were removed.

Therefore, the study is left with a rival universe of 336 intra-industry rival companies between 1990 and 2009 subdivided in 164 rivals to SWF targets from 1996 to 2009 and 172 rivals to private equity funds' targets from 1990 to 2009. Table 4.4 provides an overview of the regional distribution of competing firms, which constitutes the rival portfolios of SWF and private equity fund targets, respectively.

[33] By firm size, market capitalization of each firm is meant.

Table 4.4: Overview of SWF and Private Equity Fund Rival Samples

Continent	*Rival Country*	*SWF*	*Private Equity Funds*	*Total*
		# of Rival Firms	*# of Rival Firms*	
Africa	Egypt	1	-	1
Asia	Hong Kong	9	-	
	India	20	8	
	Japan	-	37	
	Malaysia	16	-	
	Pakistan	10	-	
	The Philippines	-	6	
	Singapore	3	-	
	South Korea	8	3	
	Taiwan	4	8	
	Thailand	6	-	138
Australia	Australia	4	14	18
Europe	Austria	-	2	
	Belgium	-	7	
	France	-	10	
	Germany	-	18	
	Greece	18	-	
	The Netherlands	-	1	
	Russian Fed	-	2	
	Spain	-	1	
	Sweden	9	3	
	Switzerland	2	5	
	Turkey	-	3	
	United Kingdom	22	12	115
North America	United States	32	32	64
Total		164	172	336

Source: Own illustration; Thomson Financial SDC; Thomson Financial Worldscope.

4.4.2 Variables

The next section briefly describes target firm, country, SWF and private equity fund characteristics, which are used in the cross-sectional analysis to test regarding their impact on shareholder wealth creation. These characteristics are classified into six categories and presented in Table 4.5.

1. Profitability and Cost Efficiency: The effect of SWF and private equity fund targets' financial performance is observed by analyzing *Return on Assets (ROA), Return on Equity (ROE), Dividend Payout per Share, Dividend Yield, Earnings per Share (EPS), Market-to-Book-Ratio, Price-Earnings-Ratio (PE-Ratio),* and *Costs-Assets-Ratio (CA-Ratio)*. ROA is the net income before preferred dividends and capitalized interest expense on debt-interest over lagged total assets. ROE is the net income before preferred dividends and capitalized interest expense on debt-interest over total equity. Dividend payout per share is calculated as dividends per share to earnings per share. The dividend yield is quantified as dividends per share divided by the market value of the firm at the end of the previous year. EPS represent the earnings for entire the fiscal year of the company divided by average outstanding shares for the entire fiscal year. As a valuation benchmark, the study uses the market-to-book ratio calculated by the market value of equity divided by the book value of equity. A low market-to-book ratio may indicate that a company is undervalued. Moreover, the PE-Ratio defined as the ratio of price per share at year end to earnings per share is analyzed. The cost efficiency is determined by CA-Ratio dividing total operating cost for the entire fiscal year by total assets.

2. Financial Policy: The study applies three characteristics to control for firm leverage and financial policy: *Leverage Ratio, Total Debt/Total Assets*, and *Equity % Total Capital,* which are three measures of long-term financial distress. Leverage ratio is defined by the division of book value of total debt by book value of total equity. Total Debt/Total Assets is calculated as book value of total debt over the book value of total assets. Equity % Total Capital is defined as book value of equity over total capital. Both variables are measures of long-term financial distress.

3. Firm Characteristics: Three variables are used describing target companies. Firm size is defined by the natural logarithm of a company's *Total Assets* and its *Market Capitalization*. The variable *% Closely Held Shares* is calculated by the number of closely held shares divided by the number of outstanding common shares and serves as a measure for managerial ownership. As already stated in previous chapters, it is generally believed that managerial ownership could attenuate the agency problems that arise from the separation of ownership and control (Jensen & Meckling (1976)).

4. Target Country-Specific Factors: It is assumed that the level of uncertainty in cross-border investments is lower in countries with higher economic freedom. In order to quantify these impacts, the analysis applies the *Index of Economic Freedom* for each country of the sample issued by the Heritage Foundation[34]. This index aggregates the score of ten economic categories, while higher scores indicate a higher degree of economic freedom. Ad-

[34] Refer to the organization's website http://www.heritage.org.

ditionally to a country's total score, the study also evaluates the contract enforceability (*Property Rights)* and the financial industry's independence from government control (*Financial Freedom*).

Table 4.5: Definition of Independent Variables

	Description	*Definition*
		Profitability and Cost Efficiency
Var1:	ROA	Return on assets
Var2:	ROE	Return on equity
Var3:	Dividend Payout per Share	Dividends per share over earnings per share
Var4:	Dividend Yield	Dividends per share over market price-year end times 100
Var5:	EPS	Total earnings over number of shares outstanding
Var6:	Market-to-Book-Ratio	Market price-year end over book value per share
Var7:	PE-Ratio	Market price-pear end over earnings per share
Var8:	CA-Ratio	Total operating expenses over total assets
		Financial Policy
Var9:	Leverage Ratio	Total debt over total common equity
Var10:	Total Debt/Total Assets	Total debt over total assets
Var11:	Equity % Total Capital	Common equity over total capital times 100
		Firm Characteristics
Var12:	Total Assets	Value of a company's book assets
Var13:	Market Capitalization	Value of a company's total shares at year end
Var14:	% Colsely Held Shares	Number of closely held shares over common shares outstanding times 100
		Target country-specific factors
Var15:	Freedom of target market	Index of Economic Freedom: Low value for repressed economies and high value for free economies
Var16:	Property Rights	Index of the contract enforceability
Var17:	Financial Freedom	Index of financial industry's independence
		SWF and Private Equity Funds Characteristics
Var18:	SWF Structure	Higher scores for every index indicate a higher degree of transparency, independence from the government and return related investment activities.
Var19:	SWF Behavior	
Var20:	SWF Accountability and Transparency	
Var21:	SWF Governance	
Var22:	Reputation	Binary dummy variable: 1 for private equity investors larger than USD 5 bn, 0 otherwis
		Deal-specific factors
Var23:	Time Effects 1	Binary dummy variable: 1 whether acquistion took place in the period between 2001 and 2009, 0 otherwise
Var24:	Time Effects 2	Binary dummy variable: 1 whether acquistion took place in the latest financial crisis (July 2007 till 2009), 0 otherwise
Var25:	Local Effects	Binary dummy variable: 1 when transactions occured in Europe or North America, 0 otherwise

Source: Accounting data – Thomson Financial Worldscope; Freedom of Market, Property Rights, and Financial Freedom – Heritage Foundation 2009; SWF Structure, Behavior, Accountability and Transparency, and Governance – Truman (2008).
Note: Per December 31 of the year prior to the year of transaction announcement.

5. Sovereign Wealth Fund and Private Equity Funds Characteristics: To describe SWF, Truman (2008), designs various indices, which are related to SWF *Structure*, *Behavior*, *Accountability and Transparency*, and *Governance*.[35] Generally, higher scores for every index of Truman (2008) indicate a higher degree of transparency, independence from the government and return related investment activities. For private equity funds, the study examines the extent to which the *Reputation* of the private equity investor has an influence on the wealth effects of private equity announcements. Reputation is defined as a binary dummy variable taking the value 1 if the private equity investor belongs to the largest private equity investors in the world (measured as having capital invested larger than USD 5 bn) and 0 otherwise.

6. Deal-Specific Factors: Measuring *Time Effects*, the study controls with two binary dummy variables: The first tests for whether the acquisition took place in the period between 2001 and 2009, where most of the partial acquisitions occurred and the second examines whether the acquisition occurred during the latest financial crisis starting in July 2007 till 2009. *Local Effects* are considered by allocating a binary dummy variable with the value of 1 if the transaction occurred in Europe or North America and 0 otherwise.

4.4.3 Estimation of Valuation Effects

As mentioned before, the event study methodology is applied to evaluate whether there are any short-term abnormal value effects on financial sector targets' stock prices because of blockholder purchases by SWF and private equity funds. Moreover, this study is adopted to estimate the valuation effects of these investments on intra-industry rival firms. Because of the wide spread application of event studies, there are numerous different methods for the individual steps.

For this study, the event study methodology is pursued relying on the market model based approach according to Brown & Warner (1985) and Dodd & Warner (1983). Abnormal returns for firm j at date t (AR_{jt}) are estimated as $AR_{jt} = R_{jt} - \hat{\alpha}_j + \hat{\beta}_j R_{Mt}$, where R_{Mt} is the return of the relevant country-specific Datastream industry index on day t. Hereby, abnormal returns describe the difference between the expected returns and the actual returns observed in the market. The market model parameters are estimated over an observation period of 180 trading days starting at day t_{-210} to t_{-31} relative to the announcement date. The study employs the announcement date as reported by Thomson Financial and the date is crosschecked using press research via Factiva. The event window comprises 61 days: T = [-30;+30] days, where $t = 0$ determines the announcement day of a transaction. The abnormal returns are summed up over 11 event windows, e.g., [-2;+2], [-30;0] etc. to attain CAR for each stock in the sample.

[35] Refer for a detailed description of the index components to Truman (2008).

Finally, the CAR are aggregated over the stocks and divided by the number of stocks to yield the CAAR of the group. This is done for target firms as well as for respective rivals.

Statistical inferences for the different event-window CAAR are drawn following the recommendation of Harrington & David (2007) and applying the test statistics of Boehmer et al. (1991).The test statistic z is used to account for the likely difference in cross-sectional return variance between the estimation period from t_{-210} to t_{-31}. Furthermore, the study also uses the t-statistic suggested by Dodd & Warner (1983) and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Tests for difference in means and medians are evaluated using the standard t-test statistic and the Wilcoxon rank sum z-score, respectively. A multivariate cross-sectional regression analysis is performed to determine the sensitivity of market reactions to transactions and firm-specific characteristics. The dependent variable in this regression analysis is the cumulative abnormal returns of targets for the interval [-2;+2]. The study estimates the t-statistics using White's heteroscedasticity-consistent standard errors (White (1980)).

In order to detect the long-term impact of the acquisition of ownership claims by SWF and private equity funds, the study calculates 60-day, 120-day, 240-day, and 480-day BHR to measure the performance of target company portfolio according to Brav & Gompers (1997) and Loughran & Ritter (1995). In general, buy-and-hold returns are influenced by overall market performance. Consequently, the BHAR are estimated using the daily closing prices relative to the associated Datastream industry index. The statistical significance of the mean and median portfolio return of target and rival firms are evaluated using a standard t-test statistic, the skewness-adjusted t-statistic suggested by N. J. Johnson (1978), and the Wilcoxon signed rank z-score.[36]

4.5 Empirical Results

4.5.1 SWF and Private Equity Fund Target Firm Characteristics

To understand the impact of SWF and private equity fund ownerships in general, the study compares in a first step SWF and private equity fund targets' financial policy and performance two years prior to two years after the announcement with each other. This matching procedure should identify similarities and difference between SWF and private equity funds targets proving either active monitoring potential or rather portfolio diversification with foreign direct listed equity investments like other institutional investors such as pension and mu-

[36] The applied research methods are described extensively in Chapters 2.3.1 to 2.3.4.

tual funds do. In a second step, both SWF and private equity fund targets are matched with their respective rival portfolios.

4.5.1.1 SWF Targets vs. Private Equity Fund Targets

Appendix 7 reports the average of the firm attributes for companies targeted by SWF as well as by private equity funds. In addition, the study applies tests for differences in firms' attributes for t_{-2}, t_{-1}, t_0, t_{+1}, and t_{+2}. It can be clearly seen from the table that SWF prefer large, cost efficient financial services companies with high dividend payments and yields whereas private equity funds focus on smaller firms regarding total assets and market capitalization with lower leverage and higher percentage of equity on total capital compared to SWF targets.

Preferences of SWF for firms distributing high dividends can be driven by the focus of these state funds to finance major development projects (Balding (2008)). Moreover, as these funds have order to preserve wealth for adjacent generations, their managers need the assurance that they get a payback from their investments in form of high dividend payments (Kern (2007)). In addition, Dong, Robinson, & Veld (2005) demonstrate that institutional investors often prefer dividends because selling the stocks is more expensive than cashing in dividends. Dahlquist & Robertsson (2001), moreover, argue that long-term oriented foreign investors show a preference for high dividends because cashing in dividends is, at least from a tax perspective, advantageous than realizing capital gains. Furthermore, this supposition is supported by a preference for firms with high return on equity (apart from year t_0) and high dividend yields indicating that SWF seek for continuous future payments from their investments. With regards to targets of private equity funds, dividend payout and yield play a minor role as both financial ratios are significantly lower on average matched against SWF targets. Private equity funds generate their returns through other actions taken. As seen in Panel II of Appendix 7, private equity fund targets demonstrate significantly lower leverage ratios and higher percentage of equity on total capital compared to SWF targets. Bearing in mind the financial strategy of private equity funds performing LBO by acquiring firms with high amount of debt and using their equity of paying back, the respective targets perfectly reflect this strategy.

Moreover, Appendix 7 clearly shows that SWF invest in significantly larger firms compared to private equity funds measured by total assets and market capitalization. In this context, Helwege, Pirinsky, & Stulz (2007) argue that a negative relationship exists between firm size and the level of information asymmetry assuming that larger companies are covered by analysts more frequently reducing information asymmetries for outside investors. Due to this fact, literature on asymmetric information argues that foreign investors might show a preference for larger firms with higher information levels (Kang & Stulz (1997)). Therefore, firm

size might be the most suitable proxy for firm recognition. As SWF managers need to conserve their wealth, they rather invest capital in firms assumed to be safe investments with steady cash flows and on which much information are available. This outcome is in line that SWF behave like foreign investors which prefer firms with certain characteristics, like size or firm recognition (Dahlquist & Robertsson (2001)). Private equity funds, however, invest in smaller firms what might have several reasons. Firstly, their financial firepower is not as strong as the one of SWF and therefore, they cannot purchase stakes of larger financial services companies; e.g., a single private equity fund might have some difficulties to finance a USD 10 bn transaction of UBS stakes. Moreover, such investments imply high concentration risks for private equity funds. Secondly, by purchasing smaller companies with assumed lower analysts' attention, private equity funds may identify undervalued targets whose value they want to boost after investments. The lower market-to-book-ratio, although not significantly compared to SWF targets, might support the hypothesis. Thirdly, private equity managers may be more experienced and more professional in contrast to the ones of SWF as they dare to invest in companies with information asymmetry to outside investors. These managers seem to act more risky as SWF managers as they invest in firms with less information available. In addition, company size is in general positively correlated with the liquidity in the respective companies stock. Therefore, SWF might also have a preference for liquid stocks and private equity funds more for illiquid stocks supporting again the undervaluation hypothesis.

Interestingly, the percentage of closely held shares reflecting companies' monitoring level of SWF targets is significantly different from the level observed for private equity fund targets, indicating that SWF do systematically invest in companies with low monitoring (managerial ownership) levels. In fact, this result supports the hypothesis that SWF create value by investing in firms with low level of managerial ownership and play an active monitoring role in order to reduce agency costs (Jensen & Meckling (1976)). However, the question arises whether SWF could be active blockholder as they invest in very large firms and whether their actions are noticeable.[37] Private equity funds invest in smaller firms in which shareholder actionism might be easier however they are investing in firms with already high managerial ownership.

Although the profitability ratios of SWF are predominantly higher as the ones of private equity fund targets, the study cannot state a significant difference. ROA, ROE, EPS and PE-Ratios attest no outstanding performance of SWF targets. This outcome might be nega-

[37] SWF target firm attributes are fairly stable two years prior to and two years after investment. In unreported tables, the study analyzes the impact of SWF ownership by calculating changes between two years prior to and two years after the SWF acquisition and find no significant effect. However, if SWF engage in activism then improvements in operating performance should follow in the post investment period.

tively influenced by the various transactions during the latest financial crisis at which SWF bought stakes in distressed European and US financial services firms. Nevertheless, SWF investments in financial service companies might be a seal of quality as these targets are large and important players with a good track record and which are too big to fail.

Summarizing, it seems that SWF rather act in their investment behavior more like passive, institutional investors seeking for further portfolio diversification with investments in foreign public equity. Those investors typically have preferences to invest in large companies with high dividend payments and cost-efficiency (Dahlquist & Robertsson (2001); Kang & Stulz (1997)). On the other hand, SWF target firms endow with low managerial ownership reflecting the possibility of active monitoring.

4.5.1.2 SWF Targets vs. SWF Rival Portfolio

As can be seen in Appendix 8, the matching of SWF targets with their rivals of the financial services industry confirms the previous outcomes that SWF purchase large firms regarding their total assets size and market capitalization. SWF seem to behave like foreign investors which have a preference for companies with certain characteristics like firm size and recognition as they are covered by analysts more regularly reducing information asymmetries and providing a clear picture of the company (Dahlquist & Robertsson (2001); Kang & Stulz (1997)). Regarding the dividend payments and yields of SWF targets, the analysis demonstrates on the other hand that the ones of SWF targets are lower compared to rival companies. However, the mean differences are not statistically significant. Moreover, state fund targets are less cost-efficient as their matched companies as the CA-Ratios of SWF targets are significantly higher compared to rivals on average. This cost-inefficiency could be proxy for the potential future improvement as SWF take an active role in target companies trying to push their efficiency to better outcomes.

Regarding the profitability ratios, the study analyzes that SWF targets are less gainful as their rivals. Although mean ROA of SWF targets are still significantly higher than the average ROA of rivals two years and one year before a transaction, the mean ROA of rivals are significantly higher two years after the transactions. Moreover, mean ROE are lower for SWF targets for all periods even if without statistical explanatory power. EPS of rivals are higher in the periods of one and two years after transactions. Nevertheless PE-Ratio and Market-to-Book-Ratio is more profound for SWF targets as for the rival portfolios. These rather poor performance values of SWF targets might symbolize the investments in distressed targets during the most recent crisis. Hereby, SWF appear as responsible market participants providing massive liquidity to distressed banks even if these investments do not pay off till now. Many SWF investments lost a huge portion of their initial values; e.g., loss of USD 3.8 bn for Sin-

gapore's SWF Temasek by investment in Merrill Lynch (Riecke, Hauschild, Benders, & Maisch (2010)). This argumentation also fits to the higher leverage and higher portion of debt to total assets of SWF targets compared to match industry group. Since many financial services firms are huge and some of them are under financial distress, taking an elevated portion of debt is comprehensible.

As seen before in the comparison of SWF and private equity fund targets, the percentage of closely held shares of SWF targets is again significantly different from the level observed for rivals. It is demonstrated that SWF might create value by acquiring firms with low level of managerial ownership and taking an active part in the every day business of the companies (Jensen & Meckling (1976)). But as beforehand, the study questions again whether SWF are active at their very huge targets firms as the study does not detect significant effect by analyzing the impact of SWF ownership by calculating changes between two years prior to and two after the SWF acquisition.

4.5.1.3 Private Equity Fund Targets vs. Private Equity Fund Rival Portfolio

Appendix 9 represents the differences of various ratios and financial figures between private equity fund targets and the matched rival portfolio. Since the statistical significance is expressed less profoundly, the comparison is not as informative as the one between SWF targets and their rivals. The study demonstrates that private equity investors target financial services firms with lower dividend payments and yields symbolizing that private equity funds are not investors that buy targets in order to diversify their portfolio and realize profits from dividends. They rather focus on investments from which they expect repayment after reorganization and restructuring. The difference in size of firms is not important to private equity funds as both targets and rivals are almost equally large measured in total assets and market capitalization. Only the period of two years after transactions, private equity fund targets demonstrate higher market capitalization as the matched portfolio. This symbolizes that capital markets evaluate the taken measurements of private equity managers at their targets as successful.

Taking into consideration the profitability ratios, private equity funds acquire presenting a poorer performance as the matched companies especially before the transactions. Differences in ROA, EPS and PE-Ratio are significantly between the two compared groups. It is assumed that private equity investors focus on companies demonstrating room for operating improvement in the medium- and long-term. Even without statistical significance, the difference in the CA-Ratio also shows cost inefficiency for private equity targets.

Moreover, the percentage of closely held shares of private equity fund targets is significantly different from the level observed for rivals. Private equity funds acquire firms with

lower level of managerial ownership reflecting the possibility of active shareholder monitoring. Combining this assumption with the poor performance of targets before transaction and the increasing market capitalization, active blockholder behavior could be confirmed. However, by analyzing the impact of private equity fund ownership by calculating changes between two years prior to and two after the respective acquisition, the study does not discover any significant effect that the operating performance increases significantly.[38]

Summarized, the sample of private equity fund targets versus their rivals and SWF illustrates more indication of active monitoring potential. Nonetheless, they also do not provide a clear picture of active monitoring as the improvement of operating performance after the acquisition fails to appear.

4.5.2 Short-term Valuation Effects

4.5.2.1 Short-term Valuation Effects to Intra-Industry Targets

Previous evidence on the engagement of new institutional investors as blockholders indicates that target firm shareholders obtain substantial positive returns in response to the announcement. Based on the events identified in the previous chapter, the study proceeds in assessing the short-term market reactions of financial services companies in which the SWF and private equity funds invest. As shown in Table 4.6, stock price effects for all 114 transactions to financial service industry targets designate significantly positive market reactions.

The stock price effects for 46 SWF targets are higher as the transactions to private equity fund targets as can be seen in Panel I. The CAAR for financial services industry targets range from +0.81% at announcement date to +6.94% for the event window [-30;+30], which are both significant at the 1% level under the respective test-statistics. The results indicate that SWF investments generate positive CAAR during the 30 trading days prior to the announcement of the investment. For example, the aggregated mean abnormal return displays a positive value of +4.27% over the period [-15;0] with a significance level of 1% for all applied test-statistics. Bearing in mind that at announcement day the market reacts only positively with +0.81%, it is suggested that the investments are already known to market participants several days in advance of the official announcement. Moreover, the positive abnormal returns imply that the market perceives purchases of large blocks of voting rights by SWF in the

[38] Private equity target firm attributes are fairly stable two years prior and to two years after investment. In unreported tables, the study analyzes the impact of private equity fund ownership by calculating changes between two years prior to and two years after the private equity fund acquisition and find no significant effect. However, if private equity funds engage in activism then improvements in operating performance should follow in the post investment period.

financial services industry as value-enhancing in general. Compared to other studies on SWF investments, the estimates of the announcement period for the investment sample exceed those of Bortolotti et al. (2009), Chhaochharia & Laeven (2009), and Kotter & Lel (2008). The first two studies report CAAR of +2.43% and +0.97%, respectively, for a [-2;+2] window. The third analysis reports average abnormal returns of 0.93% for a [-1, +1] window. All applied test statistics certificate statistical significance, mostly at the 1% significance level, which underline the hypothesis that SWF as large investors are seen as valuable investors and may enhance firm value. However, the study cannot state yet if the positive valuation effects are evoked through active monitoring potential of target firm managements or through other effects. It could be possible that SWF are seen as anchor investors providing liquidity and protect targets from hostile takeovers causing positive valuation effects.

Table 4.6: CAAR to Intra-Industry Targets

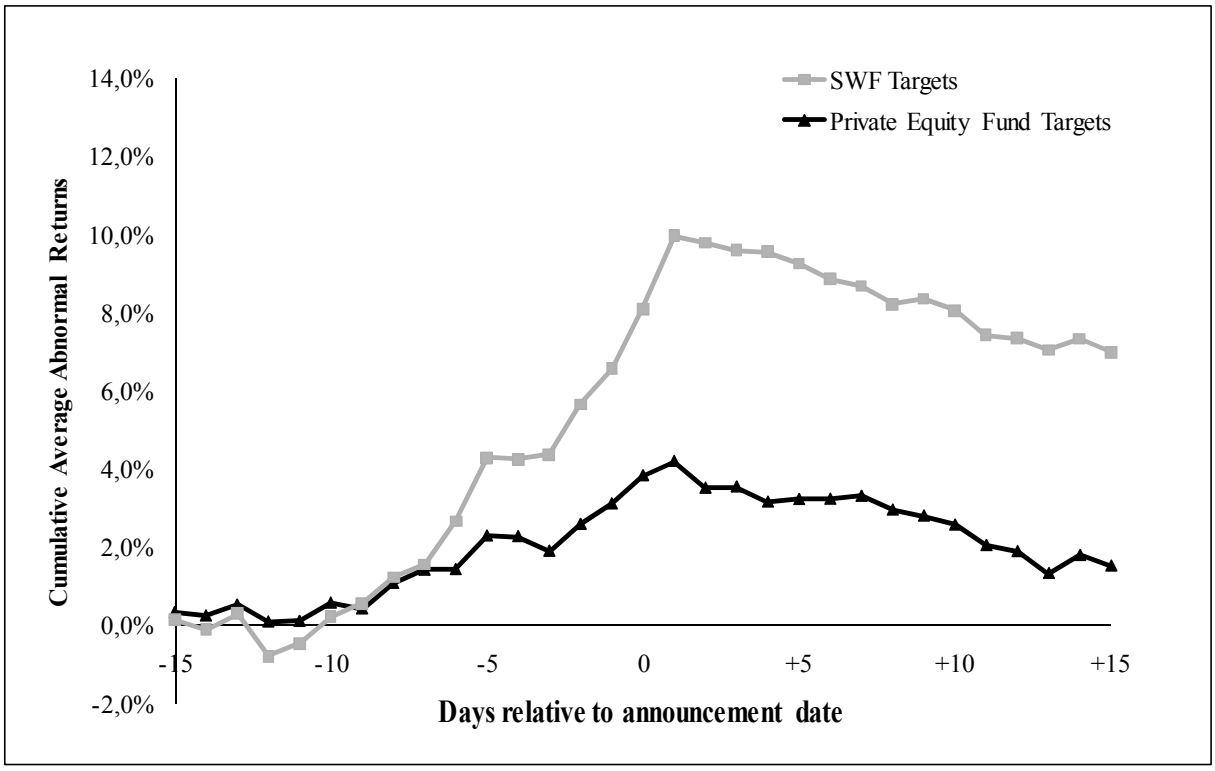
	Panel I: SWF transactions (N=46)				*Panel II: Private equity fund transactions (N=68)*				*Difference tests*	
		Boehmer	*Dodd & Warner*	*Johnson*		*Boehmer*	*Dodd & Warner*	*Johnson*	*t-test*	*Rank Sum Test*
Event window	*CAAR (%)*	*z-score*	*z-score*	*J-value*	*CAAR (%)*	*z-score*	*z-score*	*J-value*	*t-value*	*z-score*
[-30;0]	5,21	1,97 **	3,33 ***	2,73 ***	4,58	1,73 *	6,42 ***	0,94	0,11	-0,62
[-15;0]	4,27	2,90 ***	5,10 ***	2,92 ***	3,82	1,98 **	8,20 ***	1,56	0,15	-0,49
[-3;0]	2,30	2,54 **	6,33 ***	2,46 **	1,55	2,42 **	7,11 ***	1,10	0,43	-0,64
[-3;+5]	4,06	2,77 ***	5,77 ***	4,01 ***	0,95	2,75 ***	5,33 ***	0,56	1,45	0,09
[0]	0,81	1,27	5,18 ***	1,07	0,72	1,59	8,27 ***	0,87	0,08	-0,99
[0;+3]	2,61	1,97 **	5,09 ***	3,01 ***	0,43	1,69 *	4,32 ***	0,41	1,50	0,75
[0;+5]	2,57	1,85 *	4,01 ***	2,76 ***	0,11	1,98 **	4,10 ***	0,08	1,58	1,01
[-2;+2]	3,80	2,87 ***	7,20 ***	4,24 ***	1,61	2,33 **	5,66 ***	1,08	1,16	-0,11
[-3;+3]	4,09	2,85 ***	6,67 ***	4,15 ***	1,26	2,53 **	5,51 ***	0,80	1,38	0,03
[-5;+5]	4,79	2,70 ***	5,37 ***	4,04 ***	1,79	2,76 ***	6,05 ***	0,97	1,29	0,15
[-30;+30]	6,94	2,20 **	3,05 ***	2,91 ***	0,09	1,30	3,45 ***	-0,06	0,93	0,57

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table reports the cumulative average abnormal returns to targets in the financial services industry. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 180 trading days prior to the event window [-30;+30]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the cross-sectional test as proposed by Boehmer et al. (1991), the test according to Dodd & Warner (1983), and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Panel I includes SWF events (N = 46) and Panel II covers private equity fund events (N = 68). The last two rows report statistical tests for differences between the CAAR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Turning the attention to the 68 targeted financial services firms by private equity funds a comparable picture is apparent. Panel II of Table 4.6 shows significantly positive CAAR varying from +0.09% for the interval [-30;+30] to +4.58% for the [-30;0] event window. Both mean abnormal returns show a 1% significance level according to Dodd & Warner's z-score. Compared to other studies on private equity funds, the study denotes similar announcement returns when the acquirer of voting rights is a private equity fund. A. Klein &

Zur (2009) analyze for the interval [-30;+5] significantly positive abnormal returns of +2.2% for US transactions. However, these findings need to be constraint as the acquirers are a mixture of entrepreneurial activists like private investors, venture capitalists and private equity funds. Moreover, Achleitner et al. (2008) detect higher CAAR of +14.95% analyzing private equity investments in Germany. These studies argue that active monitoring and the possibility reducing agency costs can cause substantial positive announcement returns.

Figure 4.3: CAAR to Intra-Industry Targets



Source: Own calculations and illustration; Return Index data – Thomson Financial DataStream.

Comparing SWF findings with the abnormal returns of private equity funds, it is discovered that the market reactions for larger event windows are more distinct in absolute terms. It looks as if the market participants recognize purchases of large blocks of voting rights by SWF as more value enhancing than those by private equity investors supported by Figure 4.3 showing positive abnormal returns upon the announcement of a deal with higher CAAR to SWF targets compared private equity fund targets. Actually, it is supposed that higher CAAR to private equity fund targets as these investors are known for successful restructuring and turnarounds of their targets (Muscarella & Vetsuypens (1990)). However, as the tests for differences in means and medians detect no meaningful results, the elevated returns to SWF purchased firms are not systematical. The more profound short-term market reactions could be a reference to confirmation of the certification hypothesis: SWF invest in large financial services companies with good performance in the past and hence, give a seal of quality resulting in higher CAAR.

4.5.2.2 Cross-sectional Regression Analysis of Targets' short-term Valuation Effects

Next, the study investigates the different variables presented in the previous chapter, which might cause the observed positive market reactions of SWF and private equity fund targets. It is analyzed whether they are driven either by the probable activism potential associated with the amplified monitoring level by the entrance of institutional investors or rather by the fact that SWF and private equity funds possess private information of the target or certify the target's quality, respectively. Firstly, the study assesses the determinants to SWF transaction announcements and in a second step, the ones to private equity funds.

Regression Analysis of SWF Targets' short-term Valuation Effects

In order to classify the potential determinants of the possible short-term market reactions, various regressions of the 2-day cumulative abnormal returns on respective explanatory variables are performed. Table 4.7 demonstrates that both, a high degree of contract enforceability (Property Rights) and financial industry's independence from government control (Financial Freedom) increase SWF target shareholders' wealth around the announcement day. However, the overall Index of Economic Freedom has no explanatory power. Therefore, a good legal framework may serve as a guarantee to investors against expropriation. Therewith, they achieve the compensation which has been promised to them (La Porta, Lopez-de-Silanes, Shleifer, & Vishny (1997)). Hence, larger certification to investors that their investments are legally protected will increase their attendance to invest. In general, protection is especially required by long-term institutional investors like SWF. For that reason, SWF acquisitions signal favorable legal conditions and may indicate that further acquisitions by foreign investors might follow. Further, recent literature documents a positive relationship between shareholder protection and agency costs and information asymmetry.

The study detects a significantly positive relationship between market reaction and percentage of closely held shares indicating that positive valuation effects are influenced by the activism potential (Model III and Model IV). This positive and significant relation between the closely held shares and market reaction could be seen as a substitute for monitoring and governance mechanisms as CAR are increased by targets with low managerial ownership symbolizing monitoring benefits to acquirer. Moreover, since the insignificant coefficients of PE-Ratio do not indicate that high valued companies contrasted to their earnings experience less pronounced announcement effects, the undervaluation hypothesis is not confirmed (Model I and Model II). Combining these findings, the perspective of active monitoring is interpreted as value enhancing.

Additionally, all other profitability and cost efficient ratios do not influence CAR of SWF targets. This is indicated by meaningless ROA, ROE, Dividend Payout per Share and Yield, Market-to-Book-Ratio, and CA-Ratio. Only the coefficients of EPS are significantly positive in Models I and II reflecting that higher EPS have a positive impact on targets' CAR. Nevertheless, these ratios provide inconclusive results neither supporting the monitoring nor the undervaluation or the certification hypothesis.

Regarding the financial policy of SWF targets, the study does not find any relation between a target firm's leverage and the market reaction. Therefore, financial leverage has no bearing on the short-term market reaction, indicating that SWFs are not perceived as lender of last resort. The other two ratios, Total Debt/ Total Assets and Equity % Total Capital have also no meaningful explanatory power. Hence, the results contradict the ones of Kotter & Lel (2008) who analyzed evidence that firms with higher default probabilities experience higher abnormal returns upon announcement. But they confirm the findings of Dahlquist & Robertsson (2001) and Kang & Stulz (1997) demonstrating that foreign investors do not prefer highly leveraged firms.

Moreover, target firms' size has no announcement valuation neither regarding total assets nor market capitalization. Although larger firms are more intensively covered by analysts and monitored by institutional investors and regulators, this extensive observation has no meaningful impact. Therefore, it cannot be stated whether the asymmetric information problem prevails. Additionally, SWF act rather as liquidity provider supporting their large target companies by capitalization them during the financial turmoil with (Kotter & Lel (2008)). Nonetheless, larger firms might not benefit in the same way as smaller companies from such services.

Like prior research, this study also applies SWF characteristics identified by Truman (2008) to explain target firm's market reactions. Although most of the coefficients are comparable to prior results (e.g., Bortolotti et al. (2009); Kotter & Lel (2008)), Truman's (2008) governance index is of significance at Model III with a negative coefficient. SWFs with high scores for the governance index can be characterized as funds operating at arm's length from the government, presumably with an appropriate set of checks and balance. The negative coefficient means, however, that SWF targets react positively around announcement if the actual investment decisions may not be made exclusively by managers but instead may be made by the government or a government-controlled board.

Table 4.7: Determinants of the CAR to SWF Targets

Estimated coefficients are determined using a multivariate regression of the CAR to SWF targets of the financial services industry in the five-day event window [-2;+2][a] against a number of explanatory variables.[b]

CAR [-2;+2]; Estimation Period [t_{-180};t_{-30}]	*Model I*	*Model II*	*Model III*	*Model IV*
Constant	-0,40609	0,00185	-0,09348	0,02096
Profitability and Cost Efficiency				
ROA	0,00948	-	-	-
ROE	-	-0,00156	-	-
Dividend Payout per Share	-	-	0,00105	-
Dividend Yield	-	-	-	0,00028
EPS	0,01975 *	0,01584 **	-0,03093	-0,02397
Market-to-Book-Ratio	-0,00216	0,00897	-	-
PE-Ratio	0,00129	-0,00055	-	-
CA-Ratio	-0,01656	-0,22856	-	-
Financial Policy				
Leverage	0,00199	-0,00494	-	-
Total Debt/Total Assets	0,07879	0,07694	-	-
Equity % Total Capital	0,0018	0,00033	-	-
Firm Characteristics				
Total Assets	0,025668	0,00789	-	-
Market Capitalization	-	-	-0,00937	-0,00901
% Closely Held Shares	-	-	0,00203 *	0,00236 **
Target Country Specific Factors				
Index of Economic Freedom	-0,00094	-0,00133	-	-
Property Rights	-	-	0,00322 **	-
Financial Freedom	-	-	-	0,00362 **
Sovereign Wealth Fund Characteristics				
Structure	-	-	-	-0,03785
Behavior	-	-	-0,05584	-
Accountability and Transparency	-	-	-	-0,00501
Governance	-	-	-0,0403 *	-
Deal Specific Factors				
Transaction after 2000	0,06276		-	-
Financial Crisis	-	0,06406 **	-	-
European Transaction	-0,0266	0,0136	-	-
U.S. Transaction	-0,16365 **	-0,12118 **	-	-
Number of Observations	36	35	39	27
Adj. R^2	0,258 **	0,351 ***	0,235 **	0,321 ***

Source: Own calculations; Thomson Financial Worldscope; Heritage Foundation; Truman (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 46 SWF transactions in the financial services industry using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 4.4.2, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

In the cross-sectional regression this study also analyzes the impact of the target country as well as the timing of the transaction finding some evidence that market reactions are larger for targets during the recent financial crisis. Barber & Odean (2008) display that individual investors prefer to buy stocks that have caught their attention due to, for example,

increased media coverage, abnormal trading volume, or high return. Since recent transactions by SWF generate huge media coverage during the financial crisis, this dummy can be a proxy for transaction recognition. However, the positive valuation during crisis only accounts for targets outside the US as these transactions cause negative valuation effects around announcements, both during financial crisis and transactions after 2000.

Regression Analysis of Private Equity Fund Targets' short-term Valuation Effects

The study also performs various regressions of the 2-day cumulative abnormal returns on respective explanatory variables to determine explanatory power for private equity fund targets. Table 4.8 demonstrates that neither the overall Index of Economic Freedom nor the two subindices Property Rights and Financial Freedom influence private equity fund target shareholders' wealth positively two day prior and two days after announcement. Different from SWF targets, a good legal framework as guarantee to investors against expropriation plays no meaningful role evaluating CAR. Therefore, private equity funds also invest even if the legal protection is not yet matured.

Equally to SWF targets' valuation effects, the findings demonstrate significantly positive relations between market reaction and percentage of closely held shares pointing out that the market recognizes the activism potential exercised by private equity managers (Model III and Model IV). Due to these positive coefficients of the variable closely held shares, it is assumed that mean abnormal returns of private equity fund targets increase with increasing percentage of managerial ownership reflecting reduction of agency costs (Jensen & Meckling (1976)).

Furthermore, the assumption that private equity funds may play an active role at the day-to-day business of their targets is amplified by analyzing the various figures of profitability and cost efficiency supporting the monitoring hypothesis. The negative relationship between EPS and market reaction in Models III and IV points out that target firms with lower EPS are more beneficial on CAR as they have a lower, negative impact. Hence, private equity funds acquiring firms with lower EPS create short-term shareholder wealth and have the possibility to amplify this ratio during the investment horizon. The Market-to-Book-Ratio also displays significantly negative coefficients implying that low valued targets compared to their book value experience less negative announcement effects. Hence, the market believes that private equity funds are able to increase this ratio in the medium- to long-term. Moreover, this relation also supports the undervaluation hypothesis that private equity funds are able to identify undervalued targets and boost their values in the near future with respective actions taken. The positive link between PE-Ratio and market reaction indicates that higher valued compa-

nies compared to their earnings experience more pronounced announcement effects. Since these companies are not yet highly valued, private equity funds possess the potential to increase shareholder wealth through activism. Regarding targets' cost-efficiency, the negative relation between CA-Ratio and market valuation implies that more cost-efficient targets have a positive impact on CAR. Profitability ratios ROA, ROE, Dividend Payout per Share, and Yield display equally to SWF targets no impact on short-term valuation effect.

With regards to the financial policy of private equity fund targets, the study does not detect any relation between a target firm's leverage and the market reaction. However, Equity % Total Capital and Total Debt/ Total Assets have meaningful explanatory power presented by Model I and Model II, respectively. Both ratios display negative relationships to market reactions demonstrating that private equity investors do not prefer highly leveraged firms. These finding are in line with the investment strategy of private equity funds as after the acquisition they often leverage the targets. If the potential target has already a high ratio between debt and assets, this measurement becomes rather difficult.

Comparable to SWF targets, private equity fund target firms' size has no announcement valuation neither regarding total assets nor market capitalization. The reputation of private equity funds, moreover, also incorporates no meaningful impact on announcement effects. Finally, the study accounts for deal-specific factors in the cross-sectional finding no evidence that market reactions are larger for targets acquired after 2000 or during the recent financial crisis. Moreover, US targets cause negative valuation effects around announcements.

Concluding the results, the cross-sectional regressions support partially the assumption that positive short-term valuation effects to SWF targets are caused by the active monitoring potential of SWF as a positive relation between managerial ownership and market reaction prevails. Moreover, the undervaluation hypothesis is not supported either as the relationship between PE-Ratio and CAR is insignificant. Nonetheless, SWF investment behavior gives some indications that they are also quite similar to institutional investors who want to further diversify their portfolios with foreign public equity. Private equity funds, on the other, show many empirical facts supporting their role of an active investor within the financial services industry. Since they purchase smaller firms, they could be more active and their activities might be easier implemented. In addition, private equity investors also confirm the undervaluation hypothesis as the relation between Market-to-Book-Ratio and valuation effect is negative. That implies that firms with lower market value compared to their book value have a minor negative impact on CAR.

Table 4.8: Determinants of the CAR to Private Equity Fund Targets

Estimated coefficients are determined using a multivariate regression of the CAR to private equity fund targets of the financial services industry in the five-day event window [-2;+2][a] against a number of explanatory variables.[b]

CAR [-2;+2]; Estimation Period [t_{-180};t_{-30}]	*Model I*	*Model II*	*Model III*	*Model IV*
Constant	0,42033	-0,33358	0,06198	-0,5578
Profitability and Cost Efficiency				
ROA	0,00021	-	-	-
ROE	-	0,00179	-	-
Dividend Payout per Share	-	-	0,00027	-
Dividend Yield	-	-	-	-0,00449
EPS	-0,00206	0,00613	-0,01021 ***	-0,00968 ***
Market-to-Book-Ratio	-0,04028 ***	-0,05347 **	-	-
PE-Ratio	0,00159	0,00498 **	-	-
CA-Ratio	-0,13014 *	0,11656	-	-
Financial Policy				
Leverage	-	0,01931	-	-
Total Debt/Total Assets	-0,05007	-0,34358 *	-	-
Equity % Total Capital	-0,00209 *	0,00044	-	-
Firm Characteristics				
Total Assets	-0,01315	0,2195	-	-
Market Capitalization	-	-	-0,00128	0,00195
% Closely Held Shares	-	-	0,00201 *	0,00247 **
Target Country Specific Factors				
Index of Economic Freedom	0,00102	0,00259	-	-
Property Rights	-	-	-0,00125	-
Financial Freedom	-	-	-	-0,00003
Sovereign Wealth Fund Characteristics				
Reputation	-	-	0,06198	0,01666
Deal Specific Factors				
Transaction after 2000	-	0,09043	-	-
Financial Crisis	0,02844	-	-	-
European Transaction	0,02489	-0,04347	-	-
U.S. Transaction	-0,31587	-0,38358 ***	-	-
Number of Observations	52	54	58	58
Adj. R^2	0,345 ***	0,361 ***	0,293 **	0,289 **

Source: Own calculations; Thomson Financial Worldscope; Heritage Foundation; Truman (2008).
Note: Accounting figures are year-end financial figures prior to the year of transaction announcement.
[a] CAR are derived for a sample of 64 private equity fund transactions in the financial services industry using the market model approach in the event study.
[b] For a detailed description of the underlying equation and variables see Chapters 2.3.4 and 4.4.2, respectively.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

4.5.2.3 Short-term Valuation Effects to Intra-Industry Rivals

This section describes the short-term valuation effects of the designed financial services industry rival portfolio in response to the acquisition of minority ownership stakes either by SWF or private equity funds. As theoretical framework, two hypotheses were presented previously, the information signaling hypothesis and the competitive hypothesis, which are both used in the literature clarifying stock price reactions of a purchased firm's horizontal rivals.

The information signaling hypothesis predicts increasing stock prices, whereas the competitive hypothesis predicts negative market reactions.

The stock price effects for 164 rival companies of SWF targets present positive abnormal returns on average. As seen in Panel I of Table 4.9, these positive market reactions range from +0.291% for the event window [-3;0] to +1.12% for the interval [-3;+5]. Only the event window [-15;0] displays a negative average value of -0.66%, however without explanatory power as it is statistically insignificant. Consequently, the study assesses these significantly positive market reactions as a confirmation of the information signaling hypothesis. As SWF are institutional investors with financial firepower, the rival portfolio reacts positively anticipating that SWF possess private information not only on the target firms' expected future cash flow but also on payment flows of the whole financial services industry. As SWF are government-owned, an educated guess is made that these state funds obtain private information, to which no other institutional investors like mutual funds or private equity funds have access. Due to positive CAAR, moreover, it is assumed that rivals may be more likely to turn into targets of future bids of SWF, especially bearing in mind that state funds acquirer predominantly are financial services firms. Therefore, investments of SWF investors are perceived as an indication of positive new information about the future of an industry confirming the assumption made previously in the literature section.

Private equity fund rivals of 172 financial services firms, however, display throughout negative CAAR varying from -0.23% at announcement day to -18.27% for the interval [-30;+30]. Panel II of Table 4.9 shows for various event windows statistical significance applying the different test-statistics. The negative average value of the interval [-15;0] with -3.49%, for example, is significant at the 10% level under Boehmer et al. (1991) and Dodd & Warner (1983). As a result, this study states that the competitive hypothesis holds true for the private equity fund rival portfolio. These negative average abnormal returns are a proof that acquisitions of private equity funds have a harmful effect on rivals' future performance as the new institutional blockholders often try to change the board of directors and force management to pursue strategic alternatives (A. Klein & Zur (2009)). Moreover, private equity funds are known to be active investors to attain higher shareholder wealth. This often changes the way in which firms compete profoundly resulting in a more competitive environment and severe consequences for peers (F. Allen et al. (2008)). The results indicate that the capital markets perceive an engagement of private equity funds in a specific industry as an indication of an increase in product market competition. Comparing the results with the study of Mietzner & Schweizer (2008), this analysis displays different results of CAAR for private equity fund rivals: The study displays substantially positive short-term reactions to private equity target rivals confirming the information signaling hypothesis. Therefore, the assumption that

valuation effects on both groups of rivals are positive in the short-term does not hold true. Comparing the CAAR on SWF rivals (Panel I) with the abnormal returns on private equity fund rivals (Panel II), it can be noticed that the rivals' shareholders see the purchases of large blocks of voting rights by SWF as value enhancing and those by private equity investors as value-destroying. Moreover, this comparison is statistically significant for both, means and medians. For the intervals [0;+3] and [-2;+2], the positive CAAR of SWF rivals and the negative CAAR of private equity fund rivals differs significantly from each other at the 10% level. The differences in the medians are even significant for four event windows ([-15;0]; [0;+3]; [-2;+2]; [-3;+3]). These test results confirm the appliance of the two contradicting hypotheses already described beforehand.

Table 4.9: CAAR to Intra-Industry Rivals

	Panel I: SWF rivals (N=164)				*Panel II: Private equity fund rivals (N=172)*				*Difference tests*	
		Boehmer	*Dodd & Warner*	*Johnson*		*Boehmer*	*Dodd & Warner*	*Johnson*	*t-test*	*Rank Sum Test*
Event window	*CAAR (%)*	*z-score*	*z-score*	*J-value*	*CAAR (%)*	*z-score*	*z-score*	*J-value*	*t-value*	*z-score*
[-30;0]	0,59	0,14	0,09	0,55	-8,72	0,79	1,06	-1,43	1,00	-1,08
[-15;0]	-0,66	-0,69	-0,79	-1,06	-3,49	1,67 *	2,04 *	-1,18	0,64	-2,43 **
[-3;0]	0,29	0,79	0,98	0,95	-0,88	1,88 *	2,07 **	-1,02	0,92	-0,74
[-3;+5]	1,12	1,99 *	2,41 *	2,31 *	-1,98	1,41	1,94 *	-1,13	1,19	0,85
[0]	0,00	-0,20	-0,24	0,02	-0,23	0,13	0,16	-0,94	0,72	0,16
[0;+3]	0,43	1,53	1,85 *	1,44	-1,44	-1,12	-1,52	-2,12 **	1,78 *	2,50 **
[0;+5]	0,82	1,89 *	2,06 **	2,25 **	-1,33	0,52	0,75	-1,18	1,32	0,97
[-2;+2]	0,63	1,67 *	2,12 *	1,76 **	-1,72	-0,85	-0,99	-2,00 **	1,73 *	1,75 *
[-3;+3]	0,72	1,75 *	2,23 **	1,76 *	-2,09	0,29	0,36	-1,59	1,40	1,65 *
[-5;+5]	1,02	1,88 *	2,22 **	1,97 **	-2,91	0,99	1,27	-1,37	1,24	0,78
[-30;+30]	0,72	0,13	0,01	0,46	-18,27	0,38	0,82	-1,61	1,09	0,00

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table reports the cumulative average abnormal returns to rival firms in the financial services industry. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 180 trading days prior to the event window [-30;+30]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the cross-sectional test as proposed by Boehmer et al. (1991), the test according to Dodd & Warner (1983), and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Panel I includes SWF rivals (N = 164) and Panel II covers private equity fund rivals (N = 172). The last two rows report statistical tests for differences between the CAAR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

4.5.3 Long-term Market Reactions

This section provides a detailed overview of the long-term market reactions on financial services industry targets and rivals. Moreover, this study gives respective interpretations based on the given literature review and previous studies.

4.5.3.1 Long-term Market Reactions to Intra-Industry Targets

Table 4.10 shows long-term raw buy-and-hold returns for the SWF and private equity targets analyzing that the longer the holding periods the respective raw BHR become more positive. Panel I displays the raw BHR to SWF targets. For the holding periods of 60, 120, and 240 days, the mean returns show negative values. Only the raw BHR for the longest period of 480 days turn into a positive average value of +10.52%. Since all four BHR are not statistically significant, their explanatory power of proofing active monitoring is rather limited. In addition, the medians of SWF targets' BHR are not significant according the defined periods.

The raw BHR to private equity fund targets, however, only display negative values (Panel II, Table 4.10) for two holding periods (60 and 120 days). The average returns display values of 8.86% and +15.28% for the 240- and 480-days periods, respectively. The latter is even statistically significant at the 10% for both test-statistics in used supporting slightly active monitoring of private equity funds at their targets. However, the median of private equity purchased firms have not explanatory power. The tests for difference between the mean and median BHR of Panels I and II attest no statistical distinction as both applied test-statistics display no meaningful results. Hence, the supposed active monitoring role of private equity funds measured by the longest holding period of 480 days is not significant compared to SWF.

Table 4.10: Raw BHR to Intra-Industry Targets

	Panel I: SWF transactions					*Panel II: Private equity fund transactions*					*Difference tests*	
		t-test	*Johnson*	*Signed Rank Test*			*t-test*	*Johnson*	*Signed Rank Test*		*t-test*	*Rank Sum Test*
Holding period in days	*BHR (%)*	*t-value*	*J-value*	*z-score*	*N*	*BHR (%)*	*t-value*	*J-value*	*z-score*	*N*	*t-value*	*z-score*
60	-1,11	-0,35	-0,36	-0,28	46	-1,83	-0,62	-0,63	-0,42	68	0,16	0,14
120	-4,55	-1,11	-1,14	-0,82	46	-2,27	-0,58	-0,58	-0,25	66	-0,39	-0,46
240	-1,12	-0,15	-0,14	-0,51	44	8,86	1,23	1,25	1,17	65	-0,93	-0,93
480	10,52	0,93	0,97	0,69	30	15,28	1,75 *	1,86 *	1,46	58	-0,33	-0,42

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the average Buy-and-Hold Returns to target firms in the financial services industry. Statistical significance in means is tested using the standard t-test and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Statistical significance in medians is tested using Wilcoxon signed rank test. Panel I includes SWF targets (max. N = 46) and Panel II covers private equity fund targets (max. N = 68). The last two rows report statistical tests for differences between the BHR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

As the explanatory power of raw BHR is not sufficient and they are influenced by the overall market performance, BHAR are evaluated using the daily closing prices relative to the

of the financial services industry index. As a result, Table 4.11 shows these long-term buy-and-hold abnormal returns for SWF and private equity fund targets. Considering the SWF sample (Panel I), only positive mean BHAR are examined, which are taking the highest value of +5.62% for the 240-days period. However, these returns are not statistically significant, neither regarding the mean test-statistics nor the median test-statistic. The findings are in line with Dewenter et al. (2009), finding also insignificantly positive mean BHAR. Bortolotti et al. (2009), however, document a negative long-term market performance of SWF targets but fail to explain the discrepancy between short- and long-term return drift. Their distinct negative long-term stock performance might results from high prevent returns because they positively bias the coefficients of the market model. Moreover, the results of Chhaochharia & Laeven (2009) and Knill et al. (2009), mesh nicely with these researchers as both studies find a significantly negative effect of SWF investment on firm performance in longer event windows. These finding are also related to Kotter & Lel (2008), presenting deterioration in various accounting measures following SWF investment. The authors suggest that this may be related to the fact that state funds tend to invest in distressed firms. The results are consistent with concerns of government ownership in literature (privatization literature as well as Shleifer & Vishny (1986)). Nevertheless, active monitoring of SWF is not supported by mean and median BHAR, the results indicate that the overall market is efficient and that positive valuation effects occur only in the short run.

Table 4.11: BHAR to Intra-Industry Targets

	Panel I: SWF transactions					*Panel II: Private equity fund transactions*					*Difference tests*	
		t-test	*Johnson*	*Signed Rank Test*			*t-test*	*Johnson*	*Signed Rank Test*		*t-test*	*Rank Sum Test*
Holding period in days	*BHAR (%)*	*t-value*	*J-value*	*z-score*	*N*	*BHAR (%)*	*t-value*	*J-value*	*z-score*	*N*	*t-value*	*z-score*
60	2,38	1,03	1,05	0,85	46	-2,65	-1,03	-1,05	-1,45	68	1,38	1,09
120	1,75	0,59	0,60	0,52	46	-4,10	-1,31	-1,39	-0,99	66	1,30	0,84
240	5,62	1,16	1,21	0,56	44	4,87	0,87	0,91	0,45	65	0,10	0,23
480	3,08	0,49	0,51	0,07	30	1,14	0,15	0,17	-0,07	58	0,17	0,17

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the average Buy- and Hold Abnormal Returns to target firms in the financial services industry. Statistical significance in means is tested using the standard t-test and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Statistical significance in medians is tested using Wilcoxon signed rank test. Panel I includes SWF targets (max. N = 46) and Panel II covers private equity fund targets (max. N = 68). The last two rows report statistical tests for differences between the BHAR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Regarding the private equity sample in Panel II, this study examines for the two periods of 60 and 120 days negative mean BHAR of -2.65% and -4.10%, respectively. The longer intervals of 240 and 480 days, however, are positive with average BHAR of +4.87%

and +1.14%. The findings are different from the ones presented by Mietzner & Schweizer (2007), observing significantly negative median buy-and-hold abnormal returns. However, the positive mean BHAR have no explanatory power. Moreover, as it is assumed that private equity funds apply an investment strategy comprising of agency cost reduction policy, they are expected to target firms with a high potential for reducing agency costs to perform significantly better in the long term than those interested more in short-term trading-induced profits. This perspective is not supported by Panel II as the average long-term abnormal returns are indeed positive but statically insignificant. In addition, negative mean BHAR in two shorter periods are reasonable, as private equity targets' market value may decline in the subsequent year simply because of the beginning of the J-curve as described in previous chapter. The target's J-curve results from underperformance in the beginning of the investment that may be attributed to, for example, restructuring effects. The subsequent outperformance, hence, is mainly based on increased efficiency from the restructuring. However, this characteristic is not supported by the findings. Since this study analyzes only minority stake investments in financial services companies, private equity funds may face the problem of having to align their interests with those of the supervisory board members. Thus, it is more complex to reduce agency costs within a target company resulting in insignificant average abnormal returns. This explanation is in line with findings of Gompers, Ishii, & Metrick (2003) analyzing the relationship between corporate performance and shareholder rights. They assess that companies with a high level of shareholder rights outperform those with a weak level. This discrepancy is only partially reflected in share prices at the beginning of the sample period. To sum up, the findings show that private equity fund targets display no significant positive BHAR contradicting the monitoring hypothesis, but, however, serve as the proof of market efficiency.

Finally, with regards to the mean and median difference tests between Panel I and Panel II, the study notices that the mean BHAR to SWF targets are higher than the ones to private equity fund targets. Nevertheless, the comparison is statistically insignificant for both means and medians serving as no confirmation of active monitoring for both institutional investors.

4.5.3.2 Long-term Market Reactions to Intra-Industry Rivals

Regarding long-term market reactions to financial services rival companies of SWF targets, the mean and median BHR are significantly positive at the 5% level for the 480 days-period with an average value of +29.54% (Panel I, Table 4.12). Although the SWF rival portfolio is significantly negative regarding its medians for the 120- and 240-days period, it turns to a positive value with statistical significance for the longest holding period. One can state that in

the long run, financial markets see the involvement of SWF as value-creating supporting the information signaling hypothesis. Thus, rival companies do not perceive government-owned institutional investors as potential threat in the future.

Table 4.12: Raw BHR to Intra-Industry Rivals

	Panel I: SWF rivals					*Panel II: Private equity fund rivals*					*Difference tests*	
		t-test	*Johnson*	*Signed Rank Test*			*t-test*	*Johnson*	*Signed Rank Test*		*t-test*	*Rank Sum Test*
Holding period in days	*BHR (%)*	*t-value*	*J-value*	*z-score*	*N*	*BHR (%)*	*t-value*	*J-value*	*z-score*	*N*	*t-value*	*z-score*
60	-2,78	-1,46	-1,50	-0,93	164	-1,63	-1,00	-0,98	-1,81	172	-0,46	0,32
120	-4,71	-1,79	-1,81	-2,53 **	164	7,36	1,60	1,99 **	-0,18	168	-2,27 **	-1,84 *
240	-2,46	-0,43	-0,43	-2,11 **	158	14,11	1,74 *	2,26 **	0,14	165	-1,66 *	-1,81 *
480	29,54	2,56 **	2,54 **	2,30 **	106	13,40	1,51	1,94 *	-0,18	135	1,13	1,77 *

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the average Buy-and-Hold Returns to rival firms in the financial services industry. Statistical significance in means is tested using the standard t-test and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Statistical significance in medians is tested using Wilcoxon signed rank test. Panel I includes SWF rivals (max. N = 164) and Panel II covers private equity fund rivals (max. N = 172). The last two rows report statistical tests for differences between the BHR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

As seen in Panel II of Table 4.12, the mean raw BHR of private equity rivals, moreover, display significantly positive values for the 120-, 240- and 480-days periods also confirming the information signaling hypothesis. The median test-statistics of these holding periods, however, have no explanatory power. Regarding the difference tests over the four time periods, the study considers the difference between the raw BHR of SWF and private equity fund rivals are statistically significant in both ways, mean and median. Hence, the difference between the positive mean BHR to private equity fund rivals and the negative values to SWF rivals is effective. With regards to median BHR, however, negative ones to SWF rivals are more profound.

Since the raw long-term returns do not have a strong explanatory power as a whole, the study needs to take a closer look at the market-adjusted BHAR. Panel I of Table 4.13 shows that mean BHAR are statistically significant for the periods of 480 days. This period presents a high positive mean value of +22.22%, statistically significant regarding both, mean and median. Looking at the BHAR of private equity rivals (Panel II), both periods with the highest average value of +8.38% and +17.77% are significantly positive (periods of 120 and 240 days, respectively). Furthermore, the mean and median difference tests only display values with explanatory power for the median implicating that the positive median of the SWF rivals is significantly different from the negative median of the private equity rivals.

Table 4.13: BHAR to Intra-Industry Rivals

	Panel I: SWF rivals					*Panel II: Private equity fund rivals*					*Difference tests*	
		t-test	*Johnson*	*Signed Rank Test*			*t-test*	*Johnson*	*Signed Rank Test*		*t-test*	*Rank Sum Test*
Holding period in days	*BHAR (%)*	*t-value*	*J-value*	*z-score*	*N*	*BHAR (%)*	*t-value*	*J-value*	*z-score*	*N*	*t-value*	*z-score*
60	0,82	0,55	0,50	1,11	164	-0,98	-0,70	-0,68	-1,61	172	0,89	1,85 *
120	2,38	1,25	1,18	1,63	164	8,38	1,92 *	2,50 **	0,28	168	-1,25	0,95
240	7,36	1,61	1,60	0,89	158	17,77	2,30 **	3,24 ***	1,73 *	165	-1,15	-0,56
480	22,22	2,12 **	2,11 **	2,48 **	106	5,74	0,68	0,82	-0,82	135	1,24	2,37 **

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the average Buy- and Hold Abnormal Returns to rival firms in the financial services industry. Statistical significance in means is tested using the standard t-test and the skewness-adjusted t-statistic suggested by N. J. Johnson (1978). Statistical significance in medians is tested using Wilcoxon signed rank test. Panel I includes SWF rivals (max. N = 164) and Panel II covers private equity fund rivals (max. N = 172). The last two rows report statistical tests for differences between the BHAR of Panel I and Panel II using t-tests for differences in means and Wilcoxon rank sum test for differences in the medians.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

However, these findings are inconsistent with the results of the short-term event study. Although the study estimates positive short-term effects and positive long-term valuation effects of SWF rival portfolio, it is demonstrated that the initial negative valuation effect of rivals to firms targeted by private equity investors turns into positive BHAR. Overall, these results indicate that the capital markets react to information gleaned from acquisitions of voting rights by a financial investor for the industry. The positive long-horizon result for both rival portfolios is consistent with the information signaling hypothesis, which predicts positive valuation effects for industry rivals. But why do rivals to private equity targets experience a negative valuation effect over the short term, while observing a substantial positive return drift of +17.77% on average for 240 days after the announcement? One explanation could be that in the short run rivals, which are not acquired by private equity investors, fear disadvantages of being not chosen as targets. Since institutional investors investing substantial amounts of equity and resources in acquiring information about a target make an investment only if the transaction is expected to increase wealth, the rivals are worried about increased market competition and they must respond in order to avoid comparative disadvantages. However, in the long run, the whole financial services industry is recognized as a valuable industry with high attractiveness to institutional investors resulting in positive valuation effects consistent with the information signaling theory.

4.6 Conclusion

This empirical examination compares sovereign wealth and private equity fund investments in the international financial services industry. Moreover, it analyzes the different impact of

those investments on respective intra-industry rivals. The findings assume that instead of seeking only for international portfolio diversification, SWF proof to some extent investment behavior of active rather than passive investors. This fact makes them comparable to private equity funds, which are also known for shareholder activism confirmed by the study results. Compared to other studies (e.g., Bortolotti et al. (2009)), one obtains slightly empirical support that the positive announcement effects associated with an SWF investment arise from the ability of their managers to pursuit successful activism strategies. Despite of legal restrictions or the simple fact that the number of equity holdings exceeds several hundred single positions in various countries and currencies, SWF have the opportunity and capacity for shareholder activism strategy in such an important industry as the financial services industry. Since they invested multi-billions of USD during the recent financial crisis, shareholder activity by SWF are more than comprehensible as SWF investments lost highly in values (e.g., due to compulsory loan, in March 2010 the GIC suffered a loss of 70% of its original investment of USD 10 bn). The positive short-term valuation effects to private equity fund targets displays also positive values. However, this outcome is less surprising as these institutional investors are known for shareholder activism strategies in the past.

By using a detailed and extensive dataset on SWF and private equity target firms and firm-specific attributes, the study is able to compare them with each other but also with their industry peers and, as a result, characterize SWF and private equity fund ownership in great detail. It is analyzed that SWF targets are larger than private equity fund targets with higher dividend payouts and yields indicating rather that SWF managers passively seek for portfolio diversification in public equity markets instead of pursuing activism strategies. However, the managerial ownership of SWF targets is significantly lower as the one of private equity funds purchased firms pointing out the shareholder activism potential. Compared to their industry rivals, SWF target firms are again larger but they are not more profitable or distribute higher dividends to their shareholder. What contradicts shareholder activism, moreover, is the fact that SWF do not improve the operating performance in the balance sheet of the target firms for the two year following the investment. But, however, some improvements might take a longer time especially in such large targets as the ones of SWF. The differences between private equity fund targets and their intra-industry rivals are not very profound. The study demonstrates that these investors purchase firms with lower dividend payments, poorer PE-Ratio, and minor managerial ownership symbolizing the potential of shareholder activism.

Since SWF are government-owned entities, their investments may convey valuable information about the target firm and also about the financial services industry as a whole and, therefore, cause positive market reactions for the target firm. CAAR of the interval [-2;+2] are +3.80%. Moreover, it is assessed that the level of property rights and financial

freedom have a significant positive influence on the announcement returns of state fund targets as the commitment especially of long-term investors may indicate that further acquisitions by foreign investors might follow (La Porta et al. (1997)). Financial leverage has no bearing on the short-term market reaction, indicating that SWFs are not perceived as lender of last resort. Moreover, the study detects a positive relation between the percentage of closely held shares and the market reaction supporting the assessment of active shareholder strategy. Surprisingly, the positive mean abnormal returns of +1.01% for the five days-interval to private equity fund targets are less intense although expecting them to be higher as private equity managers are known as active shareholders. However, consistent with the perception that private equity funds are active and long-term orientated investors, this study finds various confirmations through the cross-sectional analysis: positive relation between PE-Ratio or the percentage of closely held shares and the market reaction and the negative relation between EPS or Market-to-Book-Ratio and valuation effects.

The rivals of both groups of institutional investors demonstrate two different results. Whereas the rivals of SWF targets react significantly positive to the announcements, rivals of private equity fund target companies display negative CAAR. With positive mean abnormal returns of +1.12% during the 9 days-interval [-3;+5], SWF rival portfolio confirms the information signaling hypothesis assessing that the transactions of SWF shed light on the quality and future potential of the financial services industry. Since private equity fund rivals display negative CAAR of -1.98% of the same event window, the competitive hypothesis is confirmed. As private equity funds are known as active shareholder amplifying the operating performance of targets, rivals fear the consequence of being not competitive anymore as they could not increase the efficiency.

Finally, the results indicate, however, that the long-lasting abnormal return drift to SWF and private equity fund targets is not different from zero for large holding periods. On the one hand, this result implies that all price related information is incorporated into stock prices upon announcement of the SWF and private equity fund investments and that the market mechanisms are efficient. On the other hand, these results militate against the shareholder activism hypothesis as one would expect improvements in operating performance and shareholder wealth. The long-term abnormal returns to both rival portfolios, nonetheless, demonstrate positive values. Regarding all results, it can be summarized that SWF investments in the financial services industry are comparable with private equity fund investments and that the market evaluate them positively with the some proof of active shareholder potential improving operating performance of their targets.

5 Study 3: What Role does Timing play at M&A? – The Case of JPMorgan Chase & Co. in light of the latest financial crisis

5.1 Introduction

In 2006, the US M&A activities attained their historical height with 11,750 deals and a total transaction volume of USD 1,484 bn even exceeding the merger peek of 2000. By midyear of 2007, however, this merger wave ended abruptly due to the burst of the US residential real estate bubble and the emergence of the subprime mortgage crisis causing the biggest financial and commercial crisis since the Great Depression. Because of their interdependences with the domestic housing market and extensive involvement in and trading with structured financial products, both US investment and universal banks suffered awfully from these financial turbulences shaking up the entire US banking industry.

The most prominent victim linked to this crisis is up to now the investment bank Lehman Brothers, which filed for Chapter 11 bankruptcy protection in September 2008 following the massive exodus of most of its clients, drastic losses in its stock, and devaluation of its assets by credit rating agencies (Lobb (2008)). Bear Stearns and Merrill Lynch, on the other hand, have been rescued by acquisitions of JPM and Bank of America (BofA), respectively (Sorkin (2008); Mildenberg & Keoun (2008)). Further of these two events, Goldman Sachs and Morgan Stanley felt impelled to give up their investment bank status transforming into common banks (Harper & Torres (2008)). Moreover, the incidents of universal banks are mostly the same: Washington Mutual has become casualty of the subprime mortgage disaster as its credit rating was reduced to junk and its stock price tumbled. As a consequence, the lender put itself up for sale purchased in the end by JPM (Levy & Hester (2008)). Wachovia also needed to be acquired by Wells Fargo (WF) after huge losses from its mortgage portfolio (Fitzpatrick, Roth, & Enrich (2008)). Citi, over several years world's largest bank according to market capitalization, was afflicted with heavy exposure caused by troubled mortgages and poor risk management. After committing huge losses, it received massive governmental support and started a reorganization with high employee lay-offs (Dash (2009)).

Nonetheless, not all US banks were negatively affected by the crisis. The outstanding example is the full service bank JPM performing extremely well within the crisis and seems to come off as market leader. Although the bank also had to write off financial investments like other banks, the amount was not as high as compared to its competitors. Despite of these write-offs, JPM succeeded to generate profit in 2008, which is astonishing in comparison of minor profits and huge losses of rival banks, respectively. Moreover, its financial situation is very solid reflected by a high tier one capital ratio and corroborated in addition by a statement

of the current bank's CEO Jamie Dimon: "our strong balance sheet, general conservatism and constant focus on risk management served us well and enabled us to weather this terrible environment" (JPM Annual Report 2008, p. 3).

Regardless of the described financial turmoil on capital markets, M&A deals still occurred at crisis even though with minor extensiveness. BofA, WF, and JPM, for instance, purchased important, distressed market players. Based on specific crisis circumstances such as discounted prices, anxious markets, and uncertainties about economic future, the study assumes that such acquisitions occur in a different light compared to acquisitions prior to crisis. Hence, by adding the role of timing at M&A as a supplementary aspect to study M&A deals, precedent literature is extended examining rather the general question whether M&A transactions generate significant shareholder value (e.g., Berger, Demsetz, & Strahan (1999); Cornett et al. (2003); Houston & Ryngaert (1994); Toyne & Tripp (1998)). The study focuses on the role that timing plays at M&A for shareholder value creation and examines how banks' acquisitions are evaluated, occurring at time of crisis compared to time prior to crisis. Following research questions shall be analyzed: Is a strong bank with a good reputation able to take advantage of the weakness of its competitors and grow substantially within the crisis? How do M&A deals of one bank, taking place prior to and during crisis, influence rival banks' performance? The results provide evidence particularly in favour of JPM, as it seems to be a clear crisis winner.

For this purpose, 72 M&A transactions of JPM and selected competitive banks are identified between January 2003 and April 2009 accounting for the latest merger wave and the most recent financial crisis.[39] By applying the event study methodology, firstly the announcement effects of pre-crisis and crisis transactions are measured. Pre-crisis transactions of JPM display mixed evidence affirming previous research. Crisis deals, however, yield overall very positive results to JPM even if statistically insignificant.Competitors, alternatively, generate negative average abnormal returns prior to crisis and mixed results during it. Secondly, the reaction of JPM to competitors' M&A announcements and the impact of JPM's transactions on results to rival banks, both prior to and during crisis, are studied. The impact of rivals' pre-crisis acquisitions on JPM yields significantly negative results and significantly positive average abnormal returns during crisis. Moreover, pre-crisis results for JPM's rivals are negative without statistical significance and demonstrate significantly negative average abnormal returns during crisis. Finally, analyzing the long-term market performance of JPM

[39] An extract of this study has been accepted by the International Journal of Monetary Economics and Finance (Mueller & Schiereck (2011)). Additionally, a German version of the extract will be published in Setzer & Schiereck (2011).

and rival banks compared to all US listed banks and the average US market, the study approves JPM's predominant performance.

The rest of the study proceeds as follows. The next section describes the merger waves in the US underlining the dynamics in the market environment, mainly during the latest wave. In section 5.3, the causes and development of the subprime crisis are shortly described overlapping to financial market. Moreover, it outlines the predominantly negative consequences for US universal banks. The next section provides theoretical foundations of the study presenting the working hypotheses, which are examined in chapter 5. Furthermore, it explains the applied methodology and clarifies the data construction of the sample. In the penultimate section, two sets of results are presented: firstly, event study results and secondly, overview of the long-term market performance. The study is concluded in section 6.

5.2 US Mergers & Acquisitions Activities

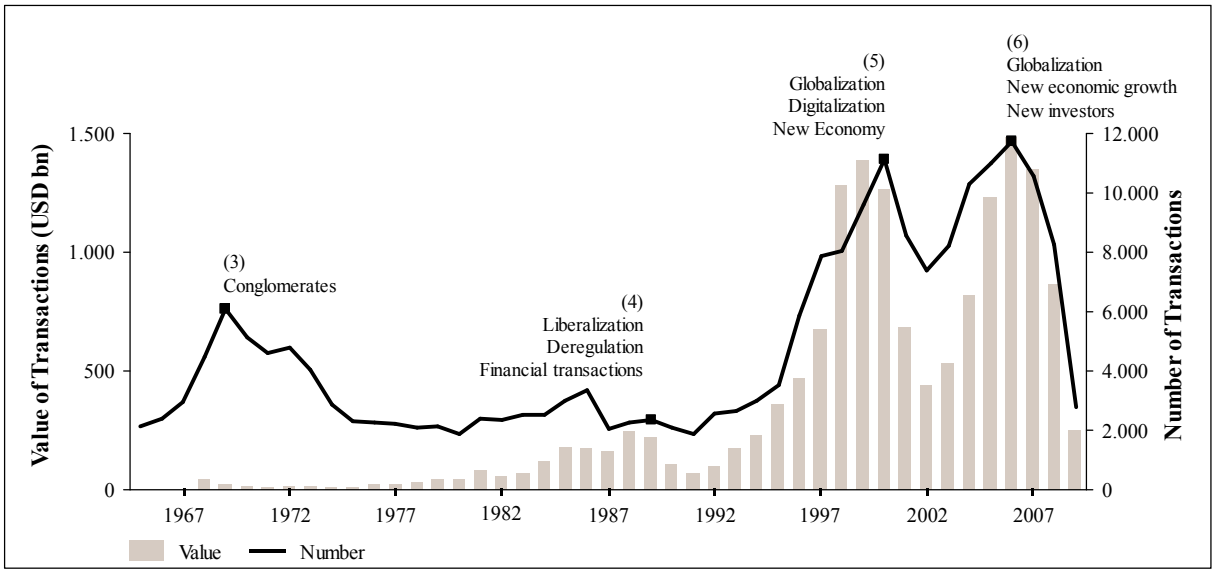
Mergers and acquisitions activities in the US are embossed by six waves (Gaughan (2002))[40]: The first wave took place between 1897 and 1904, the second between 1916 and 1929, the third one spread from 1965 to 1969, the fourth from 1981 to 1989, and the fifth ranged from 1993 to 2000. The latest M&A, whose US banking transactions are analyzed by this study, accelerated in 2003 and continued until early 2007. All these waves have been caused by shocks in the business environment including technological innovations creating excess capacity and the need for industry consolidation, supply shock like oil prices, and deregulation, liberalization as well as globalization, which simplified mergers on various industry-levels (Andrade, Mitchell, & Stafford (2001); Mitchell & Mulherin (1996)). Moreover, all waves were terminated in the end by an economic recession resulting in worldwide financial disasters (Ernst & Young (2006)). Figure 5.1 illustrates the last four M&A waves showing that starting points between waves have diminished from wave to wave and their persistence is getting shorter as well. These waves are presented in more detail in the following.

Beginning with the third wave, which was characterized by a large number of deals between companies with unrelated business operating in different industries, is often called the conglomerate wave. This wave was supported by a booming economic environment at that time offering companies with necessary resources to purchase other firms (Kleinert & Klodt (2002)). Liberalization and deregulation on the other hand caused the fourth merger wave. Comparing the third with the fourth wave, transaction values of the latter were much

[40] Gaughan describes only five of the six mergers waves in the US The latest wave was determined by the worldwide financial crisis caused by the burst of the US residential real estate bubble.

higher although the third one comprised of many more deals. As a result, this wave is known for its billion-dollar mega-transactions, which were financed with large amount of debt (Gaughan (2002)). After the economic downturn in the early 1990s, globalization and the new economy gave rise to the fifth M&A boom typified again by many large mega-transactions. However, these deals were financed through the increased use of equity and were more strategic in nature leading to consolidation in many industries (Andrade et al. (2001; Lipton (2006)). The burst of the dot-com bubble and the resultant overall downshift of the global economy terminated this wave (Wübben (2007)).

Figure 5.1: Number and Value of US M&A Transactions



Source: Own illustration; Mergerstat.
Note: Transaction value data is only available since 1968 and reflects the base equity price offered; Data displays M&A activity in the US and US cross-border transactions.

After the crash of 2000 with a 2001 merger activity half as large as the one of 2000 (USD 683 bn vs. USD 1,269 bn), the US transaction market recuperated quickly. From a low of USD 442 bn in 2002, the M&A activity restarted already in 2003 and accumulative to a total of USD 1,484 bn by the end of 2006.[41] This relatively short period of four years reflects the sixth merger wave, which is by far the largest one according to annual transactions as well as to annual dollar deal value. Comparing the transaction statistics of the last two M&A waves presented by Table 5.1, the intense market dynamic predominated during the sixth wave is even amplified: The already high annual transaction value of USD 730 bn of the fifth wave was exceeded by sixth wave annual value of USD 1,018 bn.

Besides the principal factors of globalization, rapid worldwide economic growth and higher stock market valuations, the market dynamic of this wave was driven by strategic

[41] The data concerning M&A Activity for US and US cross-border transactions are provided by Mergerstat (https://www.mergerstat.com).

choices of companies in light of opportunities provided by rising economic profits rather than by opportunistic factors. Since these companies wanted to grow internationally, cross-border M&A deals also played a vital importance (UNCTAD World Investment Report (2006)). In addition, different from the previous M&A boom, at which transactions have been carried out primarily through the exchange of shares, these M&A transactions were largely supported by favorable financing conditions reflected by low debt-financing costs and an abundant supply of credit both causing the emergence of financial crisis. Moreover, a new kind of investors such as private equity funds and other collective investment funds benefited from this ample liquidity at global financial markets and hence served as an additional engine for M&A activities. The steadily growing size of funds available to private equity markets resulted in greater competition between buyers increasing the target prices substantially. The whole transaction market was heated up even more resulting in very expensive deals. (UNCTAD World Investment Report (2007)). Due to these incidents, market participants obtained the illusion that this disproportionate economic growth and extremely positive market development would last forever. Consequently, the shock was sharply as at the middle of 2007, the US M&A activity slowed down because of the burst of the US residential real estate market terminating the merger wave and causing the financial crisis, whose causes, development and consequences for US universal banks are explained in the following.

Table 5.1: Overview of US Merger Waves

Merger waves	*∑ Deals*	*∑ Transaction value*	*Wave period in years*	*Deals p.a.*	*CAGR Deals*	*Transaction value p.a.*	*CAGR transaction value*
Third merger wave[a] (1965-1969)	18.046	n.a.	5	3.609	23,5%	n.a.	n.a.
Fourth merger wave (1981-1989)	22.810	1.316	9	2.534	-0,1%	146	11,6%
Fifth merger wave (1993-2000)	51.678	5.842	8	6.460	19,6%	730	28,0%
Sixth merger wave (2003-2006)	41.291	4.072	4	10.323	9,3%	1.018	29,4%
All merger waves	133.825	11.231	26	5.147	-	535	-

Source: Own calculations; Mergerstat.
Note: Data displays M&A activity in the US and US cross-border transactions.
[a] Given that transaction value data is only available since 1968, a meaningful information regarding to the total and annual transaction value of the third merger wave is not possible.

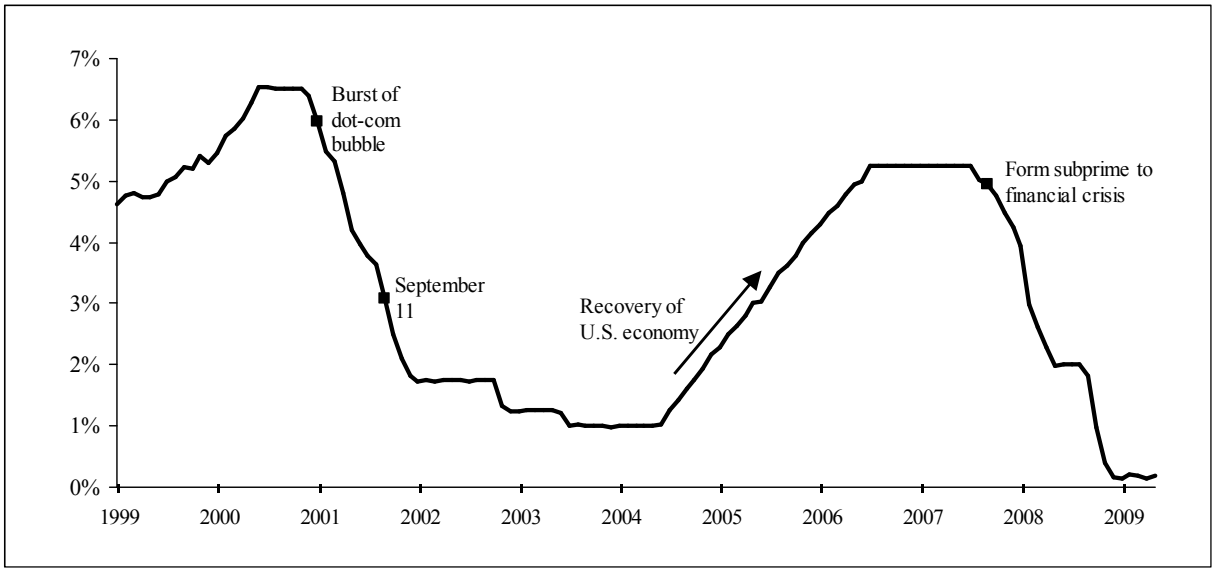
5.3 From Subprime Mortgage to Financial Crisis and Banking Consolidation

5.3.1 The Subprime Mortgage Crisis and Bank Risks

Simultaneous to the assembling of the latest M&A wave, a speculative bubble arose in the background incorporating the US housing and especially the subprime mortgage market. The collapse of these markets causing the most recent financial and commercial crisis is attributable to many factors, but three basis issues appear to be the main reasons.

Firstly, after the burst of the dot-com bubble and the uncertainties caused by the events of September 11, many investors turned to supposedly secured investments such as real estate encouraged by historically low interest rates around 1% (Figure 5.2).

Figure 5.2: Development of Fed Funds Rate



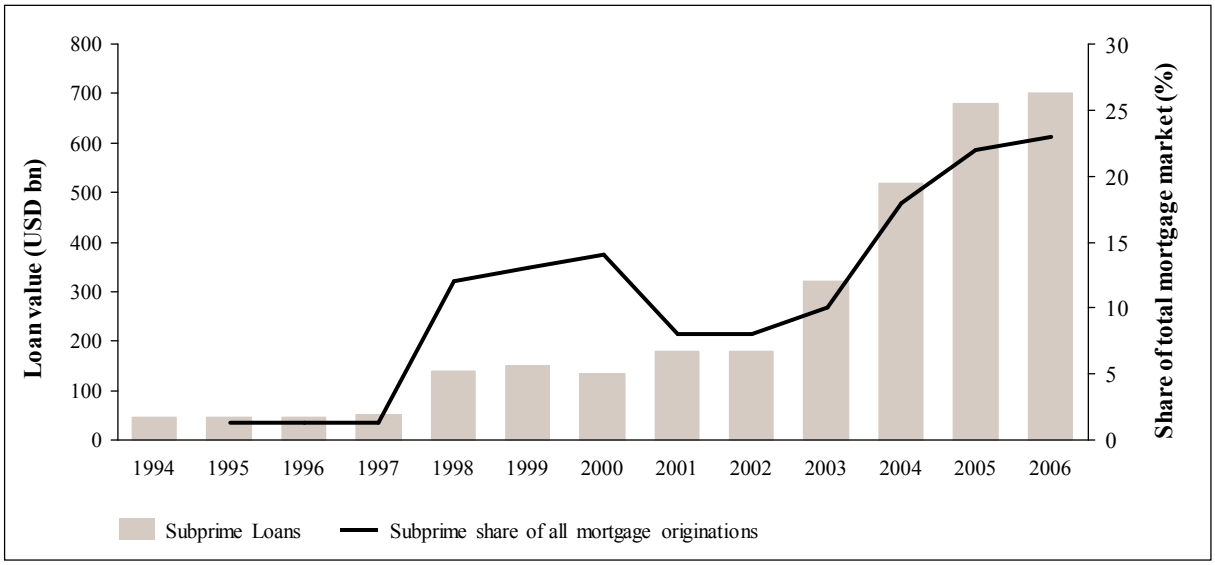
Source: Own illustration; Federal Reserve System.

Additional dynamics experienced the real estate market with the beginning of the public policy partnership for affordable housing[42] spawned by the Bush Administration in 2004. This program helped low-income families with minor creditworthiness, the so-called subprime segment, to obtain mortgages. As a result, a housing bull market comprising all social levels was created: Between 2000 and 2006, the construction of houses in the US obtained its historic peak (Shiller (2007)). Simultaneously, according to the S&P/Case-Shiller Home Price Index, the housing prices rose with two-digit growth rates. In the same period, furthermore, the subprime segment mounted from USD 150 bn to almost USD 700 bn. The

[42] The White House press release (2004), President George W. Bush, "Increasing Affordable Housing and Expanding Home Ownership", September 2, 2004.

fraction of these risky credits on the entire mortgage market rose from 8% to 23% whereas the volume of these credits also increased (Figure 5.3).

Figure 5.3: US Subprime Mortgage Market



Source: Own illustration; Inside Mortgage Finance.

The massive mortgage demand had to be financed leading to the second reason. By 2004, banks normally sold their mortgages to government-sponsored mortgage securitization monoliths collecting them at federal mortgage pools. Greater capital requirements and balance sheet controls on these monoliths imposed by the Office of Federal Housing Enterprise Oversight, however, caused revenue gaps with the banks facing now an interruption to their earnings. As a solution, banks created their own monolith look-alikes: Structured investment vehicles (SIV) and collateralized debt obligations (CDO) emerged. Consequently, private residential mortgage-backed securities (RMBS) increased aggressively, whose disposition served as necessitated refinancing for further mortgages of the prime and subprime segment. This was a momentous step as formerly mortgage loans were highly illiquid and financed mostly from deposits acquired by thrift institutions. The creation of a secondary market for these loans and standardization of mortgage products (through RMBS) transformed them into liquid assets and provided a channel through which funds from banks and other financial intermediaries and (international) investors could readily flow to the mortgage market. (Blundell-Wignall, Atkinson, & Lee (2008a)).

The third factor reflects errors and lapses committed by regulators regarding bank regulatory policy, especially bank involvement in securitization, and rating agencies. They were even exacerbated by the failure of highly sophisticated risk-management techniques developed by banks and other financial institutions. Therefore, the combination of rapid growth of over-the-counter derivatives and securities, favorable accounting rules blessed by the Se-

curities and Exchange Commission (SEC) and Financial Accounting Standards Board (FASB), and risk-based capital requirements authorized by the Congress in 1991 facilitated banks to purchase, package and sell unregistered securities. Especially the distribution of subprime CDO to a wide variety of institutional investors led to a breakdown in safety (Whalen (2008)). Moreover, rating agencies underestimated the involved risk that such financial instruments were not able to furnish the payment of the interest or the principal debt. Many CDO received an AAA rating, even though they were completely based on subprime mortgages. Banks themselves, in addition, relied entirely on their models of risk assessment, which totally underestimated the risk (Rakshit (2008)).

5.3.2 Development of Subprime Mortgage Crisis leading to Financial Crisis

On the basis of the boom at the residential housing market caused by low interest rates and governmental support, the housing prices stabilized at a high level by late summer of 2005 as in 2006, this boom found an end with a radical price decline. The problem was not the general mortgage market but mainly the subprime segment. The rate of foreclosure sales doubled over the course of the year. Especially house owners financing their property by adjustable rate mortgage were affected paying in the beginning a fixed rate mortgage and after a certain time an adjustable rate mortgage which was linked to the Fed interest rate: As interest rates climbed back up from 1% in 2004 to 5.25% in 2006 (Figure 5.2), many subprime borrowers defaulted when their mortgages were revised into much higher monthly payments. During the boom phase, borrower's creditworthiness played a minor role as the real estate could be sold at profit or be lent on supplementary. However, this practice was not feasible anymore. Defaults increased, the problem snowballed, and several lenders went bankrupt or were acquired by other banks.

In spite of the described events, most analysts expected the subprime defaults to leave the rest of the financial system and the real sector relatively unscathed (IMF (2007)). As a consequence, the real extent of the financial bubble initiated by the real estate boom hit the market participants unprepared and with terrific impact as in July 2007 Bear Stearns declared two of their hedge funds invested in CDO as worthless (Creswell & Bajaj (2007)). The trade with structured financial products ended abruptly reflected by a low issuing volume in of USD 23 bn November 2007 compared to USD 38 bn in March 2007 (Lahart (2007)).

This slowdown of the market released a chain reaction: banks and hedge funds around the globe tried to sell their CDO to only a few buyers. The crash of the CDO prices led to enormous write-downs as they were valued according the fair value principle. Due to the fear of credit failures and the unexpectedly emerged difficulties to pass acquired risk on other market participants, banks were suddenly no longer willing to lend money to companies and

to each other (Illing (2007)). The interventions of central banks worldwide calmed the nervous markets only shortly. The hoped stabilization of the money market and the disappearance of liquidity shortage could not be reached. The crash of the fixed income market overlapped the stock markets signifying the end of the latest M&A and economic boom phase and causing a tremendous increase of gold and oil prices.

5.3.3 Consequences for US Universal Banks – The Strength of JPM

The financial crisis hit many US full service banks profoundly uncovering weak balance sheets and the intense involvement with structured financial products caused by banks' changed business model. As banks moved more and more towards an equity culture with focus on faster share price growth and earnings expansion, the previous model based on balance sheets and old-fashioned spreads on loans was not beneficial anymore. This switching strategy more towards activity based on trading income and fees via securitization is key to drive revenue, Return on Capital (ROC) and share price higher, but simultaneously, forces banks taking higher risks and recognizing up-front revenue (Blundell-Wignall et al. (2008a)). At the time as the CDO market broke down, it became obvious that some banks, which are in the focus of this study, did not make sustainable business anymore but rather focusing on short-term profits. Respective accounting data in the appendix enforce these propositions[43] exposing JPM as winner and in particular, BofA and Citi as crisis losers.

Analyzing selected balance sheet figures of Appendix 10, JPM emphasizes its superior crisis performance as the numbers attest its strong equity base and a minor impact of the financial crisis. According to total assets, JPM is currently the largest US bank surpassing its fiercest competitors BofA and Citi for the first time in 2008, what is attributable to the two acquisitions of distressed banks. BofA also purchasing two major players in 2008, on the other hand, accounts only for a small increase of their total assets. Moreover, Citi even records a considerable decline in total assets of USD 249.2 bn. The other sample banks either denote a significant accession of their total assets by acquiring troubled banks also in 2008 like PNC and WF or indicate an adequate increase by internal growth such as Capital, Fifth Third, and Sun. In addition, distressed bank acquisitions also have implications on total customer loans as JPM, PNC and WF display the strongest increase in 2008 whereas Capital, Citi, Fifth Third, and Sun purchasing no troubled banks experience a minor increase or even a decline. Looking at the respective figures to BofA, the accretion is not satisfying at all bearing in mind

[43] Since US universal bank are analyzed according to the selection criteria presented in Chapter 5.4.3, only the accounting data of Bank of America (BofA), Capital One Financial Corporation (Capital), Citigroup (Citi), Fifth Third Bancorp (Fifth Third), JPMorgan Chase & Co. (JPM), PNC Financial Services Group (PNC), SunTrust Banks (Sun), and Wells Fargo (WF) are displayed.

the two conducted acquisitions. Regarding banks' equity, the majority of sample banks suffers from decreasing figures between 2007 and 2008 (BofA, Capital, Citi, Fifth Third, and Sun). Especially, Citi's equity diminishes alarmingly by 35.4%. JPM, PNC, and WF, however, generate an increase in equity. On the other hand, all banks feel impelled to elevate extremely their loan loss provisions in 2008 as they expect more write-offs of mortgage loans and credit card debts in the upcoming future. Fifth Third, for example, allocates an amount in 2008 exceeding 2007 figures by more than 630%. However, in absolute figures, Citi accounts for the highest number of USD 33.7 bn directly followed by BofA with USD 26.8 bn in 2008. Taking into consideration the interrelation between equity and loan loss provision, JPM's strength is highlighted: Despite of the rise in loan loss provision by USD 14.1 bn supplied by bank's equity, it is able to increase its equity by 9.5%, simultaneously.

Analyzing profit/loss statement figures, trading incomes in 2008 and partly in 2007 are identified as significant loss makers symbolizing the impact of the financial crisis (Appendix 11). Already suffering from a loss of USD 12.1 bn in 2007, Citi displays the most negative result with USD 22.2 bn for 2008, which is twice as high as the negative result of JPM. Write-downs/credit losses, in addition, demonstrate the same outcome: Citi is concerned very badly with USD 23.8 bn and USD 64.3 bn in 2007 and 2008, respectively, reflecting its strong involvement in CDO investments. Although BofA, JPM, PNC, and WF also denote meaningful write-downs/credit losses in 2008, these figures need to be constrained as they are partially reflecting the aftermaths of the distressed bank acquisitions. Looking at 2007 figures, this statement is strengthened, as write write-downs/credit losses are of minor characters. Nevertheless, the figures stress the high risks incorporated with these acquisitions and bring up the question whether the respective transactions costs are justified. Since both negative trading incomes and write-downs/credit losses have a negative effect on banks' overall performance, they cause a huge loss of USD 27.7 bn to Citi despite of its positive net interest revenue and other operating income. The positive opposite, on the other hand, is JPM with the highest profit of all sample banks with USD 5.6 bn in the face of negative trading outcome and high write-downs. Bearing in mind that loss has a negative effect on banks' equity, it is comprehensible that the majority of banks' equity fuses between 2007 and 2008.

Taking a closer look on performance indicators presented in Appendix 12, Citi as well as Fifth Third demonstrate the poorest results concerning ROAA and ROAE followed by Capital and BofA. Even though, JPM displays worse results in 2008 compared to prior years, both key ratios show a relatively stable performance. As measured by relative changes of ROAA and ROAE, only PNC and Sun signify a lower decline compared to JPM. Observing BofA, Citi and WF in particular, it can be observed that their high ROAE of around 20% in prior years are not substantial as they are now suffering from smaller or even negative ratios.

The numbers of banks' tier 1 capital ratios need to be examined with caution as they are boosted by governmental aid, which banks received in the context of the Troubled Asset Relief Program (TARP)[44] presented by Table 5.2.

Table 5.2: Received Bailout Money to Analyzed US Universal Banks

	Bailout money in USD bn				
Overview Banks	*2008*	*2009*[a]	∑	*Share of value (%)*	*Returned money (%)*[b]
Bank of America	15,00	37,50	52,50	30,5%	0%
Capital One Financial	3,60	-	3,60	2,1%	100%
Citigroup	45,00	5,00	50,00	29,1%	0%
Fifth Third Bancorp	3,40	-	3,40	2,0%	0%
JPMorgan Chase	25,00	-	25,00	14,5%	100%
PNC Financial Services	7,60	-	7,60	4,4%	0%
SunTrust Banks	4,90	-	4,90	2,8%	0%
Wells Fargo	25,00	-	25,00	14,5%	0%
Total	129,50	42,50	172,00	100,0%	-

Source: Own illustration; Fitch IBCA Bankscope; Propublica.
[a] 2009 comprises the first six months of this year.
[b] Returned money as by June, 2009.

However, even without the aid of USD 25 bn, tier 1 capital ratio of JPM would be at 8.9% in 2008 exceeding the 2007 ratio of 8.4% (JPM Annual Report 2008). BofA and WF obtaining the same or even higher amount as JPM present nevertheless a lower 2008 ratio. Moreover, JPM is the only approved bank in the sample besides Capital to pay back the received bailout money as its strength is testified by a positive stress test. Concerning CIR, Citi presents once more the worst results compared to the other banks displaying no alarming but a quite satisfying CIR.

Summarizing, it is adhered that the financial crisis has a minor impact on JPM's balance sheet, profit/loss statement, and respective performance ratios, which underlines its strong capital base as well as its profitability and efficiency. Various factors cause JPM's success and strength and build up its good reputation, which is assumed to influence market's perception to its M&A deals positively: Firstly, JPM stayed away from sponsoring SIV because they imposed plenty of risk and limited business purpose. Moreover, JPM substantially cut back on subprime and started reducing its exposure already in 2006. The bank never built up the structured finance business. In addition, the bank did not write option adjusted rate

[44] The Troubled Asset Relief Program (TARP) is a program of the United States government to buy senior preferred stock and warrants in American financial institutions in order to strengthen the financial sector. The shares would qualify as Tier 1 capital and were non-voting shares. Table 5.2 displays the corresponding received amounts of US full service banks analyzed in this study.

mortgage as they result often in debtors' failure. Although it was a large player in the asset-backed securities market, it avoided CDO, as the associated risk was too high. Moreover, JPM always targeted high tier 1 capital ratio of around 8% and maintained high level of liquidity to be prepared for unexpected draws. Finally, JPM avoided short-term funding and did not borrow short to invest long (JPM Annual Report 2008).

5.4 Research Hypotheses, Methodology, and Data

5.4.1 Hypotheses Generation – Role of Timing at M&A Transactions

If bank managers act in the best interest of their owners, acquiring banks' shareholders should get additional value from M&A transactions. In efficient capital markets, the abnormal stock returns reflect the value creation with respect to takeover premium, synergy potential as well as efficiency gains through economies of scale (Chehab (2002)). However, empirical research on the banking industry provides a different view. Most studies for the US banking industry find small negative abnormal returns for the group of bidders (e.g., Cornett et al. (2003); DeLong & DeYoung (2005); Houston & Ryngaert (1994); Kane (2000); Madura & Wiant (1994); Siems (1996); Toyne & Tripp (1998)).

However, these older studies do not explicitly focus on the role of timing at M&A transactions making no differentiation whether M&A deals take place during a boom phase or during a crisis. Since the latest financial crisis is harder than any other after World War II, this study addresses this research gap. It assumes that M&A transactions in financial crisis take place under very specific circumstances compared to M&A deals occurring in 'normal' time resulting in different capital market reactions as reported in former studies. At crisis time, for instance, acquisitions are rather opportunistically motivated as targets are less costly due to lower market values and fewer potential buyers. Moreover, markets overreact anxiously to any negative news whereas simultaneously, the entire economy experiences a downturn.

Consequently, these suppositions are applied to JPM, which is affected far less by the financial crisis compared to its competitors and seems to be one of the crisis winners:

H5.1a Transaction announcements of JPM during the latest M&A boom have negative abnormal effects on JPM's share prices on average according to previous research.

H5.1b Transaction announcements of JPM during the financial crisis lead to positive average abnormal returns to its shareholders as the bank does not suffer a loss of reputation and the market believes in value creating crisis transactions.

H5.1c Transaction announcements of JPM in general – before and during the financial crisis – generate as a whole positive average abnormal returns to its investors as the positive abnormal crisis returns exceed the negative abnormal boom returns on average.

Since competing universal banks of JPM are stroked more profoundly by the financial crisis, different hypotheses are necessary to derive:

H5.2a Transaction announcements of competing universal banks during the latest M&A boom have negative abnormal effects on their share prices on average according to previous research.

H5.2b Transaction announcements of competing universal banks during the financial crisis lead to negative average abnormal returns to their shareholders confirming previous research. However, they exceed the negative pre-crisis average abnormal return considerably as these banks suffer a loss of reputation due to the crisis and have to cope with tremendous internal problems.

H5.2c Transaction announcements of competing universal banks in general – before and during the financial crisis – generate as a whole negative average abnormal returns to their investors according to previous research.

Given that JPM's crisis acquisitions incorporate exclusively troubled financial institutions, the study analyzes solely transactions of troubled financial institutions by competing universal banks leading to the next hypotheses:

H5.3a Transaction announcements of competing universal banks purchasing troubled financial institutions caused by the financial crisis lead to negative average abnormal returns compared to the positive average abnormal returns of JPM's crisis transactions.

H5.3b The results to competing universal banks acquiring troubled financial institutions exceed the negative average abnormal returns to other competing universal banks acquiring non-troubled financial institutions during the crisis. Since former banks already have to cope with own tremendous internal problems, the market has even intensified doubts in successful integration of troubled targets and wealth creation.

As M&A activities of single banks have not only an effect on themselves, but they also influence the industry as a whole, the study analyzes in addition the reactions on banks to M&A announcements of their respective rival banks. Previous empirical studies analyzing

share price reactions of competing firms to M&A deals within their industry identify positive wealth effect for rivals when a competitor is being acquired (e.g., Akhigbe & Madura (1999); Eckbo (1983, 1985, and 1992); Song & Walkling (2000); Stillman (1983)).

The explanations behind the observed abnormal rival returns are subsumed under market power, efficiency and acquisition probability. Some acquisition strategies aim at increasing market power permitting merging firms and the rivals to amplify their own wealth at the expense of customers and suppliers (Berger et al. (1999)). As the number of competitors diminishes and the market concentration increases through M&A deals within the same industry, successful collusion among the remaining market participants is more easily feasible (Stigler (1964)). Therefore, M&A transactions result in a positive wealth effect for rivals as they benefit from increased industry concentration (Eckbo (1983)).

Since only 50-60% of positive rival wealth effects are explained by the factor of increased market power and its exploitation, a second factor named efficiency needs to be considered. This factor is two-folded having negative as well as positive wealth effects on rival firms. If M&A leads to efficiency enhancement of the larger combined entity, the business environment becomes more competitive and rivals get difficulties to maintain their performance level resulting in a loss of market shares and negative abnormal returns (Bohl, Havrylchyk, & Schiereck (2004)). On the other side, the amelioration of efficiency caused by the mergers of two banks has a positive impact on rivals as their efficiency also increases (Eckbo (1983)). Rivals can benefit from efficiency spill-over effects from the more efficient peer company (Claessens et al. (2001)).

The last factor describes the possibility that M&A announcement indicates that an industry-specific resource becomes more valuable increasing the acquisition probability of competitors of the target (Eckbo (1992)). Since premiums are paid for acquired firms not considering whether there is any synergy potential or bad target management, acquisitions cause an industry shock resulting in a probability assessment for potential acquisitions and abnormal positive returns of rivals (Akhigbe & Madura (1999); Song & Walkling (2000)).

The rationale behind the three main factors is supposed leading to positive wealth effects for rivals in general. The study applies them to JPM analyzing its share price reactions according to M&A announcements of its competitive banks. As a result, the subsequent hypotheses are composed with the distinction in pre-crisis and crisis deals:

H5.4a *Transaction announcements of rival banks during the latest M&A boom have positive abnormal effects on JPM's share price on average according to previous re-*

search.

H5.4b Transaction announcements of rival banks during the financial crisis lead to positive average abnormal returns to JPM confirming previous research. However, they exceed the positive pre-crisis average abnormal returns as especially the two factors, market power and efficiency spill-over effect, are amplified by the crisis due to acquisitions of important market players. The market believes that JPM is able to take great advantage of rivals' acquisitions.

H5.4c Transaction announcements of rival banks in general – before and during the financial crisis – generate as a whole positive abnormal returns to the investors of JPM on average according to previous research.

Finally, the study also adopts the described factors to rival banks analyzing their share price reactions according to M&A announcements of JPM leading to the following hypotheses:

H5.5a Transaction announcements of JPM during the latest M&A boom have positive average abnormal effects on rival banks' share prices according to previous research.

H5.5b Transaction announcements of JPM during the financial crisis lead to negative average abnormal returns to rival banks. Since JPM purchases two large and important market players at low transaction prices, it is assumed that the resulting efficiency gains to JPM have a negative effect on its competitors adumbrating the positive effects of market power and acquisition probability.

H5.5c Transaction announcements of JPM in general – before and during the financial crisis – generate as a whole negative abnormal returns to bank rivals' investors on average as the positive pre-crisis returns are beaten by the negative crisis returns.

5.4.2 Research Methodology

Following a standard research approach the event study methodology is applied to evaluate whether there are any abnormal wealth effects as a result of M&A transactions announced before and during the most recent financial crisis for selected US full service banks. This methodology has been employed in a large body of scientific research as it results in a trustworthy measure of the value creation or destruction by announcements of M&A transactions (Brown & Warner (1985); Dodd & Warner (1983); Kothari & Warner (2007)). Firstly, the study assesses the abnormal effects of acquisition announcements on bidder shareholder val-

ue, which is similar to the chosen approach of most prior research. Secondly, the analysis is extended examining effects of the same M&A announcements on non-merging rival banks.

The study pursues the event study methodology relying on the market model based approach according to Dodd & Warner (1983) and Brown & Warner (1985) following the form. Abnormal returns for firm j at date t (AR_{jt}) are estimated as $AR_{jt} = R_{jt} - \hat{\alpha}_j + \hat{\beta}_j R_{Mt}$, where R_{Mt} is the return of the relevant country-specific Datastream industry index on day t. Hereby, abnormal returns describe the difference between the expected returns and the actual returns observed in the market. The market model parameters are estimated over an observation period of 150 trading days starting at day t_{-180} to t_{-31} relative to the announcement date. Announcement dates are used as reported by Thomson Financial and crosscheck the date using press research via Factiva. The event window comprises 61 days: T = [-30;+30] days, where t = 0 determines the announcement day of a transaction. The abnormal returns are summed up over various event windows, e.g., [-1;+1], [-30;+30] etc. to attain the CAR for each stock in the sample. Finally, the CAR are aggregated over the stocks and divided by the number of stocks to yield the CAAR of the group.

To test for statistical significance of the observed CAR and CAAR, the study follows the recommendation of Harrington and David (2007) and applies the test statistics of Boehmer et al. (1991) with the respective standardization procedure suggested by Mikkelson and Partch (1988). The test statistic z is used to account for the likely difference in cross-sectional return variance between the estimation period from t_{-180} to t_{-31} and the event window following a student t-distribution with T-2 degrees of freedom. The test results appear to be robust in the absence of event-induced variance increases (Serra (2004)).[45] Test for difference in means is evaluated using the standard t-test statistic.

5.4.3 Data Sample and M&A Activities of US Universal Banks

Since this study analyzes M&A deals of the latest merger wave and the latest financial crisis comparing their assumed different market perceptions, relevant deals occur between 2003 and April 2009. These deals are identified using the Thompson Financial SDC database. To verify their M&A announcement dates, additional press research has been performed. Moreover, Datastream (also provided by Thomson Financial) is used to attain returns on individual equi-

[45] The applied research methods are described extensively in Chapters 2.3.1 and 2.3.3.

ties[46], market index, and market caps. The respective transactions have been chosen according to the following criteria:

- Transactions have been announced between January 1, 2003 and April 30, 2009.
- Bidders have been classified as US universal banks with comparable business model and total assets of at least USD 100 bn in 2008 and as recipients of TARP money of at least USD 1 bn.[47]
- Bidders performed at least four transactions in the defined period with at least one transaction during financial crisis.
- Bidders were listed on US stock exchange for at least 180 days prior to the announcement and 30 days after the announcement of transaction.
- Targets have been classified according to TF Mid Code either as "bank", "credit institution", "asset management", or "brokerage".
- Transactions have been closed – the deal status hence is "completed".
- In all transactions, a true change of corporate control took place – bidders attain full control (>50%) over the targets after the transaction.

72 M&A acquisitions are identified as basis of the analysis according to the selection criteria initiated by eight US universal banks.[48] For these banks, the event as well as the rival study is performed. Appendix 13 lists the transactions, at which grey-highlighted deals incorporate troubled target banks.[49] Table 5.3 and Table 5.4 demonstrate an overview of the M&A activity and transaction values of the sample banks, respectively, subdivided by the two periods pre-crisis and crisis. Pre-crisis describes the period of the sixth M&A wave (2003–06/2007) and crisis illustrates the time started in July 2007 lasting until today (04/2009).[50]

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[46] For individual equities and market index, the study relies on the Return Index (RI) provided by Datastream as this index accounts inter alia for dividend payments and corporate actions. Therefore, it reflects the "total return" of investors.

[47] The bidders represent simultaneously the rival bank portfolio consisting of eight universal banks.

[48] Especially the second selection criterion is important to assure comparability of the banks and the expressiveness of the rival results.

[49] The Federal Reserve supports these acquisitions of troubled banks.

[50] For the purpose of this study, the sixth merger wave is extended to July 2007 as the study takes the declaration of Bear Stearns that two of their hedge funds are worthless as starting point of the crisis terminating the latest merger wave. Market participants expected that the crash of the US housing market would leave the rest of the financial system and the real sector relatively unharmed. For this reason, the virulence of the subprime contagion caught everybody by surprise though the signs of the trouble had been obvious from the second half of 2006.

Starting with the description of the latest merger wave, US universal banks show an intense M&A activity with 57 deals pushing the banking industry consolidation compared to the minor activity of 15 deals during crisis (Table 5.3). The annual average of 12.7 pre-crisis deals amplifies this high activity compared to the annual average of 8.2 deals within the financial crisis. Citi prove to be the most aggressive bidding bank by far with 20 deals over the entire period, both on national and international level, followed by BofA, JPM and WF with "only" ten transactions each. Other sample banks are even less active with eight transactions of PNC down to four deals of Fifth Third. Citi's aggressive M&A procedure may explain partially its failure as the integration of 20 financial institutions demands high management attention and monitoring. Its pursued strategy providing all financial products of one hand supported by massive acquisitions around the globe did not pay off, as consumers were not appallingly interested in one-stop shopping. Moreover, a string of Citi's executives failed to get their arms around the sprawling global company overseeing all of the pieces, people and systems professionally (Enrich (2009)). As a result, Citi suffers extremely from the crisis, as it has to cope with tremendous organizational and operational problems, still digests recent acquisitions, and suffers from high losses caused by its involvement with structured financial products.

Table 5.3: M&A Activity of US Universal Banks

	Number of transactions							
Overview Banks	*N*	*Pre-crisis*[a]	*Crisis*[b]	*Ø N p.a.*	*Ø N pre-crisis p.a.*	*Ø N crisis p.a.*	*National*	*Cross-border*
Bank of America	10	8	2	1,58	1,78	1,09	10	-
Capital One Financial	5	4	1	0,79	0,89	0,55	4	1
Citigroup	20	17	3	3,16	3,78	1,64	10	10
Fifth Third Bancorp	4	2	2	0,63	0,44	1,09	4	-
JPMorgan Chase	10	8	2	1,58	1,78	1,09	9	1
PNC Financial Services	8	6	2	1,26	1,33	1,09	8	-
SunTrust Banks	5	4	1	0,79	0,89	0,55	5	-
Wells Fargo	10	8	2	1,58	1,78	1,09	10	-
Total	72	57	15	11,37	12,67	8,18	60	12
	100%	*79,2%*	*20,8%*	-	-	-	*83,3%*	*16,7%*

Source: Own illustration; Thomson Financial SDC.

[a] Pre-crisis data describe the period of the latest merger wave, which persisted from the beginning of 2003 to the end of June 2007.

[b] Crisis data describe the period starting in July 2007 with the declaration of Bear Stearns that two of their hedge funds are worthless (Creswell and Bajaj (2007)) till today (April 2009).

Table 5.4 presenting the transactions values of the respective M&A deals is partially constrained as not all transaction values are fully disclosed. Especially, the spent dollar amounts of Citi are rather low as only nine of 20 transaction values are released. Nevertheless, the data show that the pre-crisis deal values amount to USD 229.3 bn and the respective crisis values only to USD 78.6 bn. The average deal value of all disclosed 47 transactions reach a level of USD 6.6 bn. Taking the different lengths of the two periods into account,

however, the average crisis value p.a. is more as twice as high as the annual average pre-crisis value. Two institutions, which take no advantage of the crisis with its usually lower acquisitions prices, cause this paradox: BofA and WF make expensive crisis acquisitions of USD 52.9 bn and USD 15.1 bn, respectively. In particular, BofA's acquisition of Merrill Lynch of USD 47.8 bn was very expensive, bearing in mind the highly involved risks, the pace of due diligence process and the actual diminished market value of the broker in relation to the paid acquisition price. In addition, BofA already invested the highest amount of USD 109.4 bn during the latest merger wave compared to all other sample banks sponsored by cheap and plentiful financing in the debt markets and a booming stock market. Normally, this bank has made one big deal and then taken time to merge carefully the two institutions, but in recent years, acquisitions have come at a furious pace purchasing big companies at high prices (cp. Appendix 13). At the time of the financial crisis, the defects of this assembled empire have been exposed. By taking risks in many different businesses and geographic areas, the company exposed itself to misery when the US housing bubble burst and economy fell into recession. BofA still digesting its expensive pre-crisis acquisitions needs to integrate two distressed banks on top symbolizing even more management attention and higher incorporated risks (Karnitschnig, Mollenkamp, & Fitzpatrick (2008)).

Table 5.4: Transaction Values of US Universal Banks

	Number of transactions with disclosed value[a]					*Transaction values in USD bn*						
Overview Banks	*N*	*Disclosed value pre-crisis*[b]		*Disclosed value crisis*[c]		*Total*	*Pre-crisis*	*Crisis*	*Ø Value*	*Ø value p.a.*	*Ø value pre-crisis p.a.*	*Ø value crisis*
Bank of America	6	4	(8)	2	(2)	162,28	109,37	52,91	27,05	4,27	6,08	14,43
Capital One Financial	5	4	(4)	1	(1)	20,83	20,31	0,52	4,17	0,66	1,13	0,28
Citigroup	9	8	(17)	1	(3)	15,16	14,48	0,68	1,68	0,27	0,40	0,37
Fifth Third Bancorp	3	2	(2)	1	(2)	3,06	3,06	n.a.	1,02	0,16	0,34	n.a.
JPMorgan Chase	8	6	(8)	2	(2)	66,80	63,72	3,08	8,35	1,32	2,36	0,84
PNC Financial Services	6	4	(6)	2	(2)	13,87	7,69	6,18	2,31	0,36	0,43	1,69
SunTrust Banks	4	3	(4)	1	(1)	7,59	7,44	0,15	1,90	0,30	0,55	0,08
Wells Fargo	6	5	(8)	1	(2)	18,36	3,25	15,11	3,06	0,48	0,14	8,24
Total	47	36	(57)	11	(15)	307,95	229,32	78,63	6,55	1,03	1,42	3,90

Source: Own illustration; Thomson Financial SDC.

[a] Numbers in brackets indicate the total number of transactions over the respective time period.

[b] Pre-crisis data describe the period of the latest merger wave, which persisted from the beginning of 2003 to the end of June 2007.

[c] Crisis data describe the period starting in July 2007 with the declaration of Bear Stearns that two of their hedge funds are worthless (Creswell and Bajaj (2007)) till today (April 2009).

JPM makes acquisitions at reasonable prices before crisis and acquires two important institutions at discounted costs during the crisis. Only Capital, Citi and Sun pay less on average within the crisis. However, their investments are not as significant as JPM's ones involving Bear Stearns and Washington Mutual. Comparing their book values with the actual acquisition price, both transactions were rather 'gifts' as true acquisitions. Therefore, JPM exploits

the crisis for expansion and acquires opportunistically important competitors at very low prices, especially compared to BofA and WF. Furthermore, JPM shows no abnormally aggressive M&A behavior during the boom phase. A statement of JPM's CEO reflects its prudential M&A approach: "our goal is to be the best not necessarily the biggest […]. Ultimately, this is also the only real reason to do a merger – the client gets something better" (JPM Annual Report 2008, p. 8).

5.5 Empirical Results

5.5.1 Short-term Valuation Effects to JPM and Rival Banks

In order to derive a comprehensive picture of the wealth creation through M&A in the US banking industry during the latest merger wave and the most recent financial crisis, the first step in this analysis determines the average cumulative abnormal returns to JPM. The respective results to JPM purchasing financial institutions between 2003 and today are given in Table 5.5.

Starting with pre-crisis results of eight M&A transactions (Panel I), hypothesis *H5.1a* is partially confirmed as CAAR are significantly negative in three intervals at the 10% level ([-5;+5]; [0;+3]; [0;+30]). However, CAAR to JPM also display two significantly positive values, +0.27% and +0.08% at the 5% and 10 % level, respectively, for the event windows [-20;+20] and [-1;+1]. These results can be explained using capital market expectations of significant cost-saving opportunities in the banking industry, which dominate the negative effects of paying a premium above fair value of the target company. Overall, these mixed results are consistent with earlier US banking event studies finding significant negative abnormal returns for bidding banks on average reflecting shareholder wealth destruction (e.g., Kane (2000); Madura & Wiant (1994); Siems (1996)). The analysis perceives that both event windows estimating significantly positive CAAR incorporate the period prior to and after deal announcement whereas two of the three event windows displaying significantly negative CAAR only take into consideration the time at and after deal announcement ([0;+3]; [0;+30]).This pattern can be interpreted that the market evaluates JPM's pre-crisis transactions positive before the official announcement outweighing the negative CAAR after announcement. As a result, the negative results to JPM at and after announcement date characterize market's perception of expensive target premiums actually paid dominating possible synergies effects.

Panel II of Table 5.5 provides an overview of solely positive crisis CAAR across all event windows. Regardless of the throughout positive CAAR, hypothesis *H5.1b* cannot be

validated as they are statistically insignificant (which is not surprising with respect to a sample size of N = 2). Nevertheless, by displaying only positive and high CAAR the market seems to believe in JPM's abilities to conduct valuable transactions and to extend its market power generating shareholder wealth even though in time of crisis. Due to its strong balance sheet and excellent performance during crisis, JPM's management was requested twice by the Federal Reserve to buy troubled banks. Shareholders seem to account these actions as a seal of quality to JPM reacting consequently with positive CAAR despite of the rushed due diligences and the conjoined risks. JPM meets shareholder interests in M&A as the bank is known for its strong focus on making acquisitions pay off as it relentlessly cuts costs and obtains synergies in all areas (Sidel (2008); cp. positive CAAR of Panel I, Table 5.5). Moreover, the difference in means between the positive CAAR of Panel I and the negative CAAR of Panel II are highly significant at the 1% level for seven intervals supporting the derived hypotheses *H5.1a* and *H5.1b*.

Table 5.5: CAAR to JPM

	Panel I: Pre-Crisis deals (N=8)		*Panel II: Crisis deals (N=2)*		*Panel III: All deals (N=10)*		*Difference in Means (Panel I vs. Panel II)*	
Event window	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*Δ CAAR (%)*	*t-value*
[-30;+30]	0,23 *	0,09	9,21	1,66	2,03	0,59	-8,97	-1,01
[-20;+20]	0,27 **	-0,04	9,02	4,26	2,02	0,58	-8,75	-1,19
[-5;+5]	-0,09 *	-0,09	11,09	5,11	2,15	1,10	-11,17 ***	-3,92
[-3;+3]	0,26	0,53	9,70	6,55	2,15	1,62	-9,44 ***	-6,74
[-1;+1]	0,08 *	-0,12	9,69	35,03	2,00	1,42	-9,62 ***	-9,10
[0]	0,05	0,35	6,91	1,80	1,42	1,33	-6,86 ***	-6,85
[0;+1]	-0,01	-0,20	9,21	12,85	1,84	1,31	-9,22 ***	-9,39
[0;+3]	0,00 *	0,14	10,46	13,75	2,09	1,41	-10,47 ***	-8,17
[0;+20]	0,05	0,14	12,36	23,27	2,51	1,25	-12,31 ***	-3,52
[0;+30]	-0,47 *	-0,14	14,00	8,59	2,43	0,96	-14,47 **	-2,94

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table reports the cumulative average abnormal returns to JPM. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 150 trading days prior to the event window [-30;+30]. For the market return, the US bank index is applied. Statistical significance is tested using the cross-sectional test as proposed by Boehmer et al. (1991). Panel I includes pre-crisis deals (N = 8), Panel II covers crisis deals (N = 2), and Panel III includes all JPM deals (N = 10).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

The average abnormal returns of all ten M&A deals, furthermore, display exclusively positive values exceeding the negative pre-crisis CAAR and suppose shareholder wealth creation in summary (Panel III, Table 5.5). However, due to the lack of statistical significance at any defined level, they are not meaningful leading to the rejection of hypothesis *H5.1c*. As an additional analysis of JPM's transactions, the short-term chart developments of selected M&A deals are plotted (Appendix 14). Taking into account the two most significant transactions of JPM during the latest merger wave according to deal volume plus the two crisis deals, the

study observes positive daily stock reactions regarding the Bank of New York and the two crisis deals 30 days before and after the announcement date. These reactions are once again a demonstration of investors' belief in the ability of JPM's management to create value through conducted transactions.

Analyzing CAAR to competing commercial banks, pre-crisis average abnormal returns of 49 transactions exhibit negative results across all event windows (Panel I, Table 5.6). The negative returns range from -0.6% in the interval [-3;+3] to -1.4% in the event window [-30;+30] demonstrating higher negative pre-crisis CAAR as JPM's ones. However, since they show no statistical significance according to the z-test, hypothesis *H5.2a* is not supported. There is no conclusive evidence that shareholders at acquiring banks experience value creation or destruction through these M&A deals; in other words whether premiums paid to targets above their fair values dominate cost-saving opportunities or vice versa.

Table 5.6: CAAR to Rival Banks

	Panel I: Pre-Crisis deals (N=49)		*Panel II: Crisis deals (N=13)*		*Panel III: All deals (N=62)*		*Difference in Means (Panel I vs. Panel II)*	
Event window	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*Δ CAAR (%)*	*t-value*
[-30;+30]	-1,40	-1,54	-3,82	-2,09	-1,92	-2,38	2,41	1,25
[-20;+20]	-1,26	-1,59	-1,08	-1,13	-1,22	-1,97	-0,17	-0,10
[-5;+5]	-0,70	-1,40	-1,40	-1,52	-0,85	-1,98	0,70	0,60
[-3;+3]	-0,56	-1,58	-1,26	-1,02	-0,71	-1,90	0,70	0,63
[-1;+1]	-0,84	-2,46	0,34	-0,38	-0,59	-2,31	-1,18	-1,35
[0]	-0,75	-2,13	-0,50	-1,08	-0,70	-2,39	-0,25	-0,29
[0;+1]	-0,78	-1,96	0,02	-0,61	-0,61	-2,03	-0,80	-0,87
[0;+3]	-0,60	-1,54	0,29	-0,46	-0,41	-1,52	-0,90	-0,77
[0;+20]	-0,92	-1,61	-1,05	-0,93	-0,95	-1,86	0,13	0,08
[0;+30]	-0,94	-1,37	-1,48	-1,10	-1,06	-1,76	0,54	0,33

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table reports the cumulative average abnormal returns to rival banks. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 150 trading days prior to the event window [-30;+30]. For the market return, the US bank index is applied. Statistical significance is tested using the cross-sectional test as proposed by Boehmer et al. (1991). Panel I includes pre-crisis deals (N = 49), Panel II covers crisis deals (N = 13), and Panel III includes all rival bank deals (N = 62).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Furthermore, hypothesis *H5.2b* does not hold true either as crisis CAAR of 13 M&A deals display both positive and negative values (Panel II, Table 5.6) without any statistical significance. Moreover, they exceed the negative abnormal returns of pre-crisis transactions (Panel I) only rarely. The market participants do not seem to punish bidding banks with negative CAAR acquiring financial institutions during the crisis in spite of high write-offs, minor profits or losses, management failures, and bad reputation. The positive results of Panel II even indicate that some banks generate positive crisis CAAR exceeding the negative average

abnormal returns of other banks in the panel. Consequently, as *H5.2a* and *H5.2b* are not validated by the results, hypothesis *H5.2c* is not conformed either although CAAR of all 62 transactions show negative values ranging from -0.4% to -1.9% (Panel III, Table 5.6). Since the z-test does not attest statistical significance, there is no decisive evidence that acquisitions of rival banks destroy shareholder value in general. The difference in means between Panel I and Panel II are not statistically significant at any level affirming the rejection of the respective hypotheses.

Table 5.7: Crisis CAAR to all Banks

	Panel I: JPM crisis deals - Troubled banks (N=2)		*Panel II: Rival banks crisis deals - Troubled banks (N=5)* [a]		*Panel III: Rival banks crisis deals - Ordinary banks (N=8)* [b]		*Difference in Means (Panel I vs. Panel II)*	
Event window	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*Δ CAAR (%)*	*t-value*
[-30;+30]	9,21	1,66	-1,79	-0,69	-5,08	-2,05	11,00	0,98
[-20;+20]	9,02	4,26	0,31	-0,20	-1,96	-1,17	8,71	1,00
[-5;+5]	11,09	5,11	-0,81	-0,23	-1,77	-1,74	11,89 *	1,79
[-3;+3]	9,70	6,55	-1,94	-0,40	-0,83	-0,93	11,64	1,74
[-1;+1]	9,69	35,03	1,18	0,17	-0,19	-0,70	8,51 *	1,78
[0]	6,91	1,80	0,05	-0,33	-0,83	-1,13	6,86	1,36
[0;+1]	9,21	12,85	1,05 *	0,13	-0,62	-0,99	8,16	1,72
[0;+3]	10,46	13,75	2,56	0,44	-1,12	-1,23	7,91	1,02
[0;+20]	12,36	184,03	1,41	0,17	-2,59	-1,36	10,95	1,15
[0;+30]	14,00	8,59	1,34	0,16	-3,24	-1,55	12,66	1,28

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the crisis results for M&A transactions of all banks in the sample between 07/2007 and 04/2009. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 150 trading days prior to the event window [-30;+30]. For the market return, US bank index is applied. Test for significance is the z-test according to Boehmer et al. (1991).
[a] Bank of America (2), Capital One Financial (1), PNC Financial Services (1), and Wells Fargo (1) acquired troubled banks during financial crisis. Numbers in brackets indicate the number of conducted deals.
[b] Citigroup (3), Fifth Third Bancorp (2), PNC Financial Services (1), SunTrust Banks (1), and Wells Fargo (1) acquired ordinary banks during financial crisis. Numbers in brackets indicate the number of conducted deals.
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Table 5.7 takes a closer look at crisis CAAR subdivided in acquisitions of troubled and non-troubled banks. Panel II provides an overview of the average abnormal returns accumulative by rival banks purchasing troubled banks. In general, the CAAR to all rival banks acquiring troubled banks receive insignificant results. The negative sign of the entire sample is mainly attributable to BofA reflecting market's doubts in value creating acquisitions due to high acquisitions prices, huge risks at target banks' balance sheets, and rushed due diligences (Karnitschnig et al. (2008)). Since the positive CAAR is statistically significant at the 10% level in the event window [0;+1], hypothesis *H5.3a* is clearly rejected. The market appears to perceive rivals' ability to acquire troubled banks as a sign of banks' confidence in significant cost-saving opportunities and synergy effects leading to positive CAAR even if they are af-

fected intensely by the crisis demonstrated by corresponding accounting figures. Mean difference test between Panel I and Panel II is statistically significant at the 10% level for the event windows [-5;+5] and [-1;+1] indicating the crisis CAAR to JPM are significantly more positive than the ones to rivals banks.

Moreover, taking JPM's positive, but insignificant CAAR into account, the rejection of hypothesis *H5.3a* is even strengthened. Furthermore, results according to rival banks purchasing non-distressed banks during crisis are solely negative spreading from -0.2% ([-1;+1]) to -5.1% ([-30;+30]) presented by Panel III. Given that their CAAR are not statistically significant and CAAR to banks bidding for troubled banks are (significantly) positive, hypothesis *H5.3b* does not hold true either. However, the results of Panel III confirms previous research like the ones of Cornett & De (1991), Hudgins & Seifert (1996), or Zhang (1995) as the results give neither room for interpretation of value creation nor value destruction.

Turning the attention to the results of the rival bank event study, the study only accounts for M&A deals within the US and not for cross-border transactions to assure comparability of the study results and validation of the three defined rival factors market power, efficiency, and acquisition probability for the US banking industry. As a result, the international transactions of Citi (10 deals), Capital (1 deal) and JPM (1 deal) are not considered at the rival bank event study. Panel I of Table 5.8 provides an overview of negative CAAR to JPM across all event windows instead of the predicted positive ones leading to rejection of hypothesis *H5.4a*. Hence, the results of 40 rival transactions to JPM do not confirm the previous research of Eckbo (1985), Song & Walkling (2000), and Stillman (1983), for instance. In recent years, however, researchers shifted their focus from averaging returns across different industries to a more detailed analysis of a single industry. In contrast to studies calculating an average across industries, the single-industry studies provide empirical evidence of negative abnormal returns to rival companies being in line with outcomes of this study (e.g., Akdoğu (2003); Akhigbe & Martin (2002)). Their results imply that the negative effects of growing superior market player exceed the positive values of information on efficiency and cost-saving to rivals. Since the mean of -0.03% in the three-day event window [-1;+1] and the mean of -0.08% in the two-day event window [0;+1] exhibit statistical significance at the 10% and 5% level, respectively, their interpretation are confirmed making a clear assessment of value destruction to JPM's shareholders through pre-crisis rivals' M&A transactions.

Assessing the reactions of JPM's share price to rivals' crisis M&A deals, some significantly positive CAAR are shown for Panel II (Table 5.8) at a statistical significance level of 10% for the intervals [-3;+3] with +0.19%) and [0;+30] with +1.38%. These positive CAAR support hypothesis *H5.4b*. Since many important market players of the US were obliged to put themselves up to sale due to the crisis (what was very unlikely to happen without

it), the resultant concentration within the US banking industry intensifies the market power of the remaining financial institutions and enhances efficiency of the whole industry justifying the significantly positive results to JPM. Hence, previous research like the studies by Eckbo (1983; 1985) is confirmed, for instance. The mean difference test between Panel I and Panel II indicate that the pre-crisis CAAR to JPM are significantly more negative than the respective crisis CAAR on many intervals.

Regarding all 51 rival banks' transactions during the sixth merger wave and latest financial crisis, hypothesis *H5.4c* cannot be confirmed as respective CAAR to JPM demonstrate negative values (Panel III, Table 5.8). Positive crisis results are overcompensated by the negative pre-crisis CAAR to JPM. This outcome gives room for interpretation that all transactions of rival banks have negatively impacted JPM as their deals lead to efficiency enhancement of the combined entity instead of efficiency spill-over effects benefiting JPM. The results of Panel III equal to Panel I confirm the negative findings of Akdoğu (2003) and Akhigbe & Martin (2002).

Table 5.8: CAAR to JPM according to Rival Bank' M&A Transactions

	Panel I: Pre-Crisis deals (N=40)		*Panel II: Crisis deals (N=11)*		*Panel III: All deals (N=51)*		*Difference in Means (Panel I vs. Panel II)*	
Event window	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*Δ CAAR (%)*	*t-value*
[-30;+30]	-1,79	-1,27	3,31	0,87	-0,69	-0,36	-5,10 **	-2,10
[-20;+20]	-1,54	-1,46	3,30	1,15	-0,50	-0,44	-4,84 **	-2,43
[-5;+5]	-0,64	-1,09	1,84	0,67	-0,10	-0,41	-2,47 **	-2,01
[-3;+3]	-0,48	-0,56	0,19 *	0,11	-0,33	-0,45	-0,67	-0,78
[-1;+1]	-0,03 *	0,09	0,01	-0,65	-0,02	-0,17	-0,04	-0,09
[0]	-0,05	-0,15	-0,74	-2,34	-0,20	-1,11	0,68 **	2,45
[0;+1]	-0,08 **	-0,02	-0,47	-1,03	-0,16	-0,56	0,39	0,81
[0;+3]	-0,31	-0,39	-0,46	-0,46	-0,34	-0,58	0,15	0,21
[0;+20]	-1,06	-1,37	0,35 *	0,10	-0,63	-0,80	-1,40	-1,20
[0;+30]	-1,31	-1,61	1,38	0,67	-0,73	-0,80	-2,69 *	-1,87

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the results to JPM for M&A transactions of JPM's rival banks. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 150 trading days prior to the event window [-30;+30]. For the market return, US bank index is applied. Test for significance is the z-test according to Boehmer et al. (1991). Panel I includes pre-crisis deals of rival banks to JPM (N = 40), Panel II covers crisis deals of rivals banks to JPM (N = 11), and Panel III includes all rival bank deals to JPM (N = 51).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Rivals' CAAR as a reaction to M&A transactions conducted by JPM during the latest merger boom do not validate the hypothesis *H5.5a* as they demonstrate solely negative results across all event windows as shown by Panel I of Table 5.9. Equally to *H5.4a*, they do not support the outcome of Song & Walkling (2000) or Stillman (1983), but is consistent to the results of Akdoğu (2003) and Akhigbe & Martin (2002). However, due to the absence of sta-

tistical significance, explanatory power of the negative CAAR is limited and prevents a clear interpretation of the results. However, the negative CAAR give tendency that the market perceive the transaction of JPM as a potential threat to its rival banks.

Considering specific crisis circumstance affecting the respective CAAR (Panel II, Table 5.9), hypothesis *H5.5b* is validated as negative values dominate pre-crisis values. Furthermore, the event window [-3;+3] with CAAR of -1.5% is statically significant at the 5% level strengthening the validity of the hypothesis. The market seems to evaluate the two crisis transactions of JPM as a future threat to its competitors as it acquired two important market players at very low acquisition prices. Therefore, the negative values of growing superior market player with a highly possible predominance overlie the positive effects of market power for the whole banking industry, acquisition probability as well as information on efficiency and cost-saving as proved by previous studies (e.g., Akdoğu (2003); Akhigbe & Martin (2002)). The difference test in means between Panel I and Panel II signifies that the pre-crisis CAAR to rivals are significantly more negative than the respective crisis CAAR.

The last hypothesis *H5.5c* is not proved as the CAAR to rival banks of all M&A transactions are not statistically significance even if they display only negative values (Panel III, Table 5.9). Although, CAAR of all deals are more negative than the ones of pre-crisis, their explanatory power is limited due to the missing statistical significance equivalent to the result of Panel I.

Table 5.9: CAAR to Rival Banks according to JPM's M&A Transactions

	Panel I: Pre-Crisis deals (N=49)		*Panel II: Crisis deals (N=14)*		*Panel III: All deals (N=63)*		*Difference in Means (Panel I vs. Panel II)*	
Event window	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*CAAR (%)*	*z-score*	*Δ CAAR (%)*	*t-value*
[-30;+30]	-0,93	-1,36	-0,38	-0,39	-0,81	-1,35	-0,55	-0,23
[-20;+20]	-0,57	-1,57	-1,22	-0,65	-0,72	-1,65	0,65	0,26
[-5;+5]	-0,75	-1,89	-2,92	-0,49	-1,24	-1,59	2,16	1,04
[-3;+3]	-0,36	-1,43	-1,46 **	0,02	-0,61	-0,99	1,10	0,68
[-1;+1]	-0,35	-1,84	-1,78	-1,15	-0,67	-2,18	1,43 **	2,27
[0]	-0,19	-2,30	-2,18	-2,49	-0,63	-3,24	1,99 ***	4,55
[0;+1]	-0,23	-1,57	-2,03	-1,52	-0,63	-2,18	1,81 ***	3,15
[0;+3]	-0,06	-0,38	-3,33	-0,79	-0,79	-0,84	3,27 **	2,21
[0;+20]	0,04	-0,83	-4,53	-1,62	-0,98	-1,69	4,57 ***	3,87
[0;+30]	-0,02	-0,73	-4,31	-1,08	-0,97	-1,28	4,29 **	2,07

Source: Own calculations; Return Index data – Thomson Financial DataStream.
This table shows the results to rivals banks for M&A transactions of JPM. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 150 trading days prior to the event window [-30;+30]. For the market return, US bank index is applied. Test for significance is the z-test according to Boehmer et al. (1991). Panel I includes pre-crisis deals of JPM to rivals (N = 49), Panel II covers JPM's crisis deals to rivals (N = 14), and Panel III includes all JPM's deals to rivals (N = 63).
***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

5.5.2 Long-term Market Performance of JPM and Rival Banks

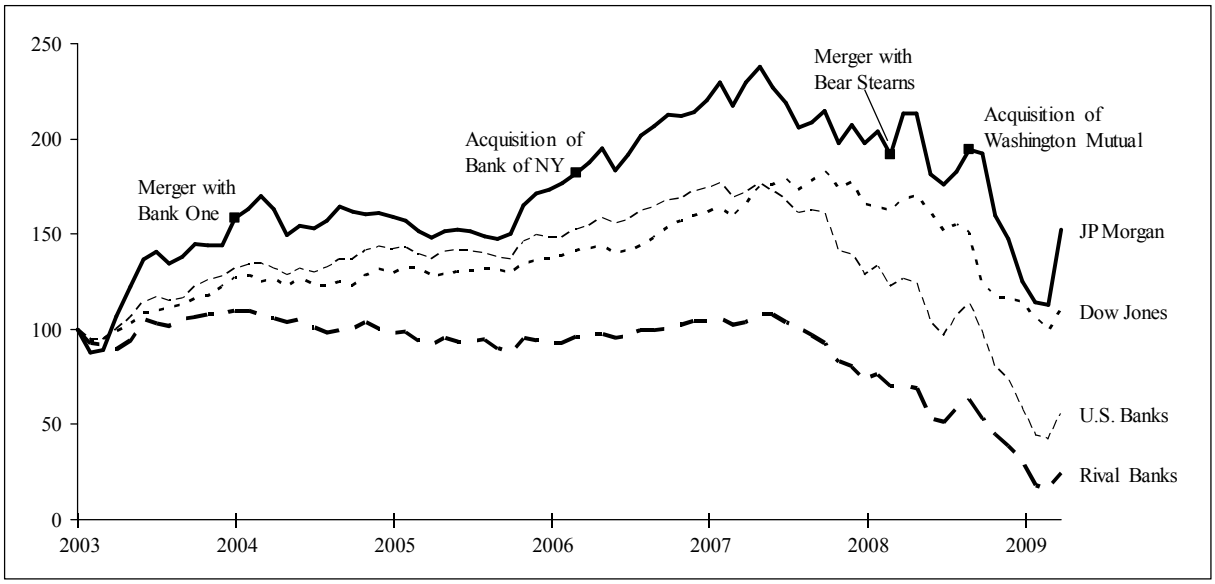
Besides the short-term performance results of the event study, the study analyze the long-term market performance results of JPM and its rival banks. Figure 5.4 shows the long-term chart development perceiving that the monthly performance of JPM is far better than rivals' performance and as well as superior compared to all US banks in general and the Dow Jones Industry Average, respectively.

Taking into account the two most valuable transactions of JPM during the latest merger wave plus the two crisis deals, positive long-term reactions of JPM stocks are observable. After the acquisition of Washington Mutual, however, stock value decreases tremendously in a very short time similarly to all other displayed stocks. This decline is caused by agglomeration of very terrible news in a very short time about different market players and their risky assets causing even bank bankruptcies (e.g., bankruptcy of Lehman Brothers; almost collapse of Washington Mutual and Merrill Lynch; banks' exposure of troubled papers in their balance sheets, etc.). Consequently, the whole market was trembling as every day popped up bad news amplifying the uncertainty and anxiety in the market. Since nobody really knew how many toxic papers were in banks' balance sheets, investors wanted to get rid off their papers causing falling share prices. Nevertheless, JPM's stock recovers rapidly generating a value of 152 by end of April 2009 compared to the starting value of 100 in 2003. It is surprisingly, moreover, that the lowest value of JPM does not occur during crisis but in the beginning of 2003 with a low February value of 87.[51]

Rivals, on the other hand, are far away from its starting value of 100. They seem to need more time for recovery. Furthermore, the reactions of rival banks to announcements of JPM's crisis transactions seem to be negative. However, this observation needs to be constraint as rivals' reactions might be diluted by the most recent market turbulences. Looking closer at the individual bank returns displayed by Appendix 15, the study examines that all banks apart from JPM have declining values. Fifth Third, Citi and BofA are front-runners with a negative CAGR over the entire period of -33.8%, -30.6% and -19.4%, respectively. Although JPM generates a negative crisis CAGR of -24.0%, nevertheless, the total CAGR is positive even though with a minor value. The two-digit compounded annual growth rate of a period of four and half years is more or less destroyed in less than two years reflecting the not existing sustainability of the business of US banks.

[51] The bad performance of JPM resulted from its role in the Enron collapse. JPM was accused of helping Enron to disguise its debt.

Figure 5.4: Long-term RI Development of JPM and Rival Banks

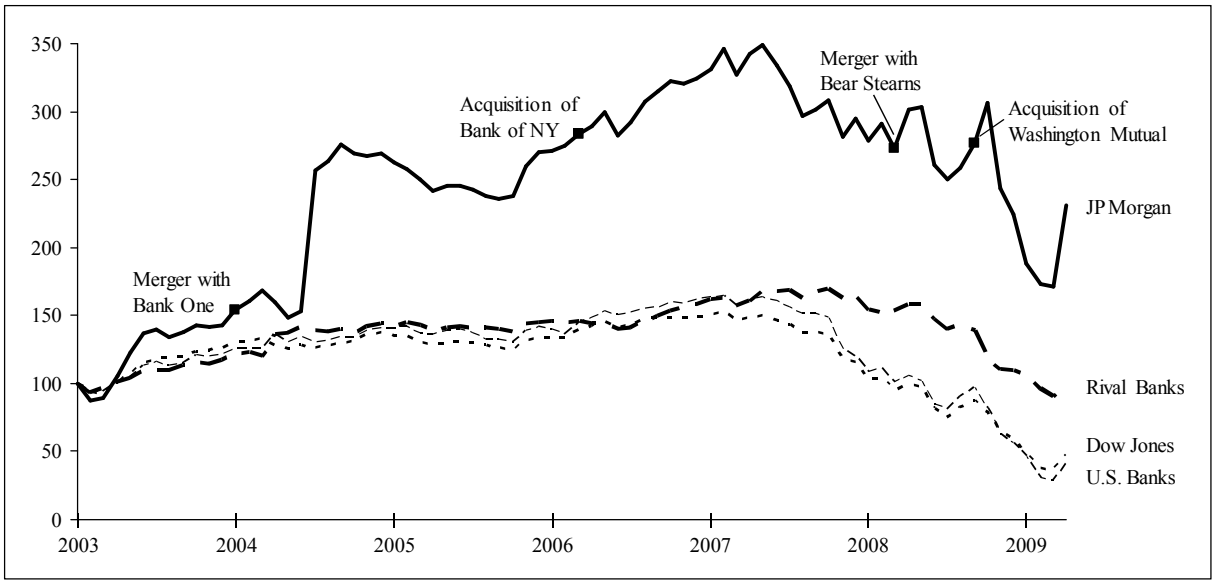


Source: Own illustration; Return Index data – Thomson Financial DataStream.
Note: Monthly average data. Values are indexed with base year value of 100 in 2003.

Examining monthly long-term market values, JPM is clearly identified again as the best performer (Figure 5.5). Although its market values decrease once again in fall of 2008, rapid recovery is noticeable by the end of April 2009 reflected by an increase of 230 points compared to the base value of 100 in 2003. Moreover, JPM's M&A activities seem to strengthen its market value performance as shown by four example transactions. In addition, JPM considerably outperforms its competitors as well as all listed US Banks and the US economy measured by Dow Jones Industry Average. Although, the market value performances of rival banks are worse than JPM's, their market values do not decrease as much as the ones of all US banks and other companies, respectively.

Appendix 16 highlights the even more precisely the market value development of the respective banks. Once being the largest bank according to its market value Citi loses more than 90% of its market value within only six years. This loss is underlined by the highly negative CAGR of 32.4%. Only two banks, JPM and PNC, generate positive CAGR over the analyzed period. The loss of market values within crisis is tremendous reflecting a huge destruction. JPM is now the largest US bank according to market value as well as to total assets as described beforehand. Moreover, it generated the highest profit of all sample banks emphasizing its winning role within the crisis.

Figure 5.5: Long-term Market Value Development of JPM and Rival Banks



Source: Own illustration; Market Value data – Thomson Financial DataStream.
Note: Monthly average data. Values are indexed with base year value of 100 in 2003

5.6 Conclusion

The study builds up a sample of banking M&A transactions with change of corporate control among US universal bidding banks and (inter-)national target financial institutions covering in total 72 deals between the latest merger wave starting in 2003 and the latest financial crisis beginning by midyear 2007 lasting until today. The study contributes additional findings to the existing US bank M&A research. By analyzing the M&A announcements occurring during the sixth merger boom and the most recent financial crisis, the study quantities the impact of timing on these M&A transactions. Since it identifies JPM as a winning bank of the crisis based on strong financial figures, respective working hypotheses are derived, which are applied to JPM and its rival banks. The pre-crisis findings to JPM show consistency with US evidence and confirm the hypothesis by receiving significantly negative abnormal returns or value destruction for its shareholders from M&A deals. The pre-crisis CAAR results to rival banks, however, experience no significant abnormal returns resulting rejection of hypothesis and no clear statement whether their M&A transactions are value creating or destructing. Moreover, although the returns to JPM's shareholders during the crisis are highly positive, they do not validate the assumption due to the lack of statistical significance. The crisis CAAR to competitive banks present mixed results, without statistical significance. Taking even a closer look on crisis CAAR to banks acquiring distressed banks, this study reports significantly positive results.

In terms of rival effects, the study measures negative pre-crisis CAAR to JPM and competitive banks according to rival banks' and JPM's M&A transactions, respectively. Concerning CAAR to JPM according to rivals' crisis acquisitions it finds support for the hypothesis as they are statistically significant with positive values. Hence, transactions of rivals in time of crisis have a positive impact on value creation of JPM's shareholders. The results to competitive banks in reference to JPM's crisis transactions also confirm the assumption display significantly negative values. The interpretation of the results, however, is different as they symbolize value destruction to rival banks caused by crisis M&A transactions of JPM.

The study quantifies the stock market perceptions regarding banking M&A transactions in the time of boom phase and time of crisis from different perspectives of one bank benefiting from the crisis and banks suffering from it. The outcomes clarify the particular assumed value creation to a bank like JPM with a strong performance rewarded by the stock market for its sustainable business and renunciation on focusing on short-term profit. Other banks can learn from JPM as a bank with strong strings to its core banking business and long-term strategy generating profits.

Nevertheless, the explanatory power of this study needs to be limited, as abnormal average returns are only short-term market assessment of expected average returns from M&A transactions. Moreover, the results may be distorted by the market turbulences caused by the crisis, the non-rational behavior of market participants, and small data samples where statistical significance is not deducible. Additional studies are needed to asses the long-term bank performance of winners and losers of the most recent financial crisis. Furthermore, accounting for the role of timing at M&A as the distinction between pre-crisis and crisis M&A transactions can be assessed in further studies incorporating previous merger waves and crises.

6 Conclusion

This doctoral thesis analyzes the impacts on shareholder wealth creation and operating performance through M&A transactions in the international financial services industry. A detailed analysis of this topic is mainly interesting for two main reasons, namely the relevance of the global financial service industry as a research object and the measurement and evaluation of short- and long-term M&A success within this industry.

Due to increased costs, deregulation of markets, technological and financial innovations reducing former market power, the competitive pressure within the financial service industry has steadily increased (Llewellyn (1999)). If the home financial services industry is already highly consolidated and future growth potentials are limited, a possible solution for these incidents might be external growth on foreign markets in order to regain former strengths. Hence, M&A became a common strategic response for many industry players. Moreover, considering the financial services industry as the backbone of every nation's economy, it is regarded as a value-investing industry with steady returns on investments and constant growth rates. As a result, this industry is very attractive for institutional investors which are needed to invest their capital gainfully provided by their respective shareholder and/or customers. Hence, the ownership structure of financial services companies are more and more influenced by these institutional investors exhibiting intensified active blockholder behavior. Nonetheless, despite of huge earnings and high growth rates, the financial services industry presented itself very vulnerable as the latest financial crisis detects serious weaknesses of this industry emptying into bankruptcy of several major players and the strongest world economic crisis after the Great Depression.

In order to account for the different perspectives, three independent studies are conducted pursuing three objectives: (1) determining and evaluating short-term M&A success of cross-border M&A in EME by answering the question whether these transactions differ from international M&A transactions between industrialized countries, (2) analyzing the impact of M&A deals to financial services industry companies in conjunction with particular kinds of institutional investors, and (3) examining the role of timing at M&A transactions. Consequently, these perspectives serve as the basis for the upcoming empirical analysis.

Addressing the first objective, the opening empirical study of this doctoral thesis analyzes the short-term post-merger capital market performance of acquirers and targets in 163 horizontal takeover transactions involving acquirers from industrialized economies and targets in EME between 1994 and 2007. This capital market performance is compared to the performance of cross-border takeover deals occurred exclusively between acquirers and tar-

gets from industrialized nations. The event study results indicate that cross-border M&A in EME do not yield significant abnormal returns on average, neither negative nor positive, for bidders targeting listed and non-listed banks similar to previous research results on cross-border banking M&A. Some sub-samples of bidder banks, however, presume wealth creation to shareholders contradicting previous studies. Testing for several value drivers of M&A success for bidder banks, the regression models indicate that drivers for successful M&A deals are primarily dependent on bidder M&A experience, purchase of non-listed, larger target banks, and low GDP growth in EME, which are different from the ones identified by previous studies only accounting for M&A transactions in industrialized countries.

In a second step, the data sample of this study is limited to those transactions in which both targets and bidders are listed on the stock exchange getting an insight of the influences of public targets on the respective bidders. The study analyzes significantly positive abnormal returns for target bank shareholders whereas returns to acquiring bank shareholders and combined entities are significantly negative. The results to bidders and targets support the ones of previous analysis whereas the negative abnormal returns of combined entities on average do not support the assumption that international bank M&A deals generate wealth on a net and aggregate basis. The regression models applied to the sub-sample demonstrate that the returns to bidders are influenced positively by bidder M&A experience, larger asset size of targets, less liberalized economies with poor governance. Concerning target banks, the impact of institutional and economic environment as well as target bank profitability and smaller asset size are significant determinants of their abnormal returns similar to previous empirical results. The returns to combined entities are only affected positively by bidder M&A experience. Since more and more banks facing increasing competitive domestic markets, they believe in future shareholder value in EME offering potentials for expansion and diversification. Consequently, useful direction, in which countries to invest, is needed partly given by the respective findings of the first study. However, its explanatory power is limited, as abnormal returns are only short-term market assessments of expected returns from M&A transactions. Further studies are required to assure the market valuation of long-term bank performance following cross-border M&A transactions in EME.

The next empirical study addresses the second objective by comparing and evaluating state and private equity fund minority investments in financial service targets and their associated valuation effects on directly affected intra-industry rivals both in the short and long run. Moreover, the analysis should identify whether both institutional investors are equally active blockholders. By using a detailed dataset of 46 SWF and 68 private equity fund investments as well as 336 intra-industry rivals between 1990 and 2009, the different investment patterns of SWF and private equity funds are compared: SWF targets are larger than

private equity fund targets with higher dividend payouts and yields, but with lower the managerial ownership suggesting shareholder activism potential of SWF. The results from an extensive matched sample of SWF targets and industry peers show that SWF targets are indeed much larger but not more profitable than their industry peers. However, since no improvements in operating performance of SWF targets are depicted, shareholder activism could not be confirmed completely. Furthermore, the differences between private equity fund targets and their intra-industry rivals demonstrate that these investors purchase firms with shareholder activism potential as they pay lower dividends and display poorer PE-Ratio and minor managerial ownership. Similar to SWF managers, private equity fund managers do not reach improvements in operating performance two years after the transactions contradicting active monitoring.

The short-term market reactions to announcements to SWF and private equity fund targets are significantly positive; surprisingly the abnormal returns to SWF targets are higher compared to private equity fund targets although private equity funds are known to be more active in the past. The cross-sectional regression to SWF investments, the study detects a positive relationship between the percentage of closely held shares and the market reaction supporting again the assessment of active shareholder strategy. Consistent with the perception and previous studies that private equity funds are active and long-term orientated investors, the analysis find various confirmations by the cross-sectional analysis: positive relation between PE-Ratio or the percentage of closely held shares and the market reaction and the negative relation between EPS or Market-to-Book-Ratio and valuation effects. The short-term post-merger capital market performance to rivals of both groups of institutional investors demonstrates two different results. Whereas the rivals of SWF targets react significantly positive to the announcements confirming the information signaling hypothesis, rivals of private equity fund target companies display negative CAAR proving the competitive hypothesis. SWF rival portfolio assesses that the transactions of SWF shed light on the quality and future potential of the financial services industry. As private equity funds are already known as active shareholder amplifying the operating performance of targets, rivals fear the consequence of being not competitive anymore as they could not increase the efficiency.

Finally, the long-horizon impact on the acquisitions of the different ownership claims, both on targets and on rivals, is examined. The results indicate that the long-lasting abnormal returns to SWF and private equity fund target firms are not different from zero for large holding periods consistent with the view of efficient markets, but contradicting the theory of active investing. The long-term abnormal returns to both rival portfolios, nonetheless, demonstrate positive values verifying the quality of the financial services industry in general. Regarding all results, SWF investments in the financial services industry are compa-

rable to private equity fund investments to some extent and that markets evaluate them positively with a slight proof of active shareholder and monitoring potential, which is assumed to improve the operating performance of their targets. Since the short-term valuation effects both on SWF and private equity fund targets are not explained satisfyingly further studies on these institutional investors are necessary in order to give a full explanation about the abnormal positive short-term market reaction.

The third empirical study accounts for the last objective examining the role of timing at M&A transactions and shareholder wealth creation by assuming that crisis M&A acquisitions occur in a different light compared to acquisitions prior to crisis. Since the US universal bank JPM is identified as crisis winner, the study is conducted as a case study on this specific bank.

Accounting for wealth implication of M&A transactions during the latest merger wave and the latest financial crisis, 72 M&A transactions of JPM and selected competitive banks are identified between January 2003 and April 2009. By applying the event study methodology, the announcement effects of pre-crisis and crisis transactions are measured. Pre-crisis transactions of JPM display mixed evidence affirming previous research on M&A in the banking industry. Crisis deals, however, yield overall very positive results to JPM even if statistically insignificant. Competitors, alternatively, generate negative average abnormal returns prior to crisis and mixed results during it. Moreover, the reaction of JPM to competitors' M&A announcements and the impact of JPM's transactions on the results to rival banks, both prior to and during crisis, are studied. The impact of rivals' pre-crisis acquisitions on JPM yields significantly negative results and significantly positive average abnormal returns during crisis. Moreover, pre-crisis results for JPM's rivals are negative without statistical significance and demonstrate significantly negative average abnormal returns during crisis hence symbolizing value destruction to rival banks. Finally, analyzing the long-term market performance according to total returns and market capitalizations of JPM and rival banks compared to all listed US banks and the US average market, the study approves again JPM's predominant performance by presenting the highest values.

Nevertheless, the explanatory power of the last study needs to be limited, as abnormal average returns are only short-term market assessment of expected average returns from M&A transactions. Moreover, the results may be distorted by the market turbulences caused by the crisis and rather small data samples in some observations where statistical significance is not deducible. Further research is requested to asses the long-term bank performance of winners and losers of the most recent financial crisis. Furthermore, accounting for the role of timing at M&A as the distinction between pre-crisis and crisis M&A transactions can be assessed in further studies incorporating previous merger waves and crises.

To sum up, this thesis provides a comprehensive assessment of short- and long-term success of M&A in the international financial services industry from three different perspectives. Across a number of different research approaches, it determines the capital market expectations of M&A transactions dependent of the type of acquirers, either some of the financial services industry or outside the industry and the time of acquisition. These findings may support future investors by finding their right strategy whether they decide to invest in the financial services industry or not.

Appendix

Appendix 1: Geographical Distribution of all Cross-border M&A Transactions

Bidding Country	*Target Region*			*Total*
	Asia	*CEE*	*Latin America*	
AT		10		10
BE		8		8
CA	1		7	8
CH			1	1
ES		1	18	19
FI		1		1
FR	1	14	3	18
GER	1	6	1	8
GR		18		18
IE		1		1
IT		21		21
NL	1	4	3	8
NOR		2		2
PT		1	1	2
SE		8		8
UK	4	1	8	13
US	7	3	7	17
Total	15	99	49	163

Source: Own illustration; Thomson Financial SDC.
Legend: AT = Austria, BE = Belgium; CA = Canada, CH = Switzerland, ES = Spain, FI = Finland, FR = France, GER = Germany, GR = Greece, IE = Ireland, IT = Italy, NL = The Netherlands, NOR = Norway, PT = Portugal, SE = Sweden, UK = United Kingdom, US = United States.

Appendix 2: Geographical Distribution of Cross-border M&A Transactions of listed Bidders and Targets

Bidding Country	*Target Region*			*Total*
	Asia	*CEE*	*Latin America*	
AT		2		2
BE		3		3
ES			4	4
FR		3		3
GER		2		2
GR		1		1
IT		8		8
NL	1	1		2
PT		1		1
SE		1		1
UK	1	1	1	3
US	4	1	1	6
Total	6	24	6	36

Source: Own illustration; Thomson Financial SDC.
Legend: AT = Austria, BE = Belgium; ES = Spain, FR = France, GER = Germany, GR = Greece, IT = Italy, NL = The Netherlands, PT = Portugal, SE = Sweden, UK = United Kingdom, US = United States.

Appendix 3: Characteristics of Independent Variables to all Bidders

Var	*Description*	*N*	*Average*	*Median*	*Std. dev.*	*Min.*	*Max.*
Var1:	Target ROE	162	7,43%	9,10%	37,04%	-199,42%	267,60%
Var2:	Target CIR	161	75,43%	67,83%	43,47%	12,87%	391,67%
Var3:	Target CA-Ratio	163	6,67%	5,16%	5,26%	0,67%	32,80%
Var4:	Relative ROE	162	0,62	0,60	2,86	-10,18	23,68
Var5:	Relative CIR	160	1,23	1,07	0,75	0,17	6,92
Var6:	Relative CA-Ratio	162	3,01	2,13	2,86	0,30	19,23
Var7:	Relative asset size (logarithms)	163	0,72	0,73	0,09	0,49	0,93
Var8:	Dummy: listed target	163	-	-	-	-	-
Var9:	Dummy: bidder's Cross border M&A experience	163	-	-	-	-	-
Var10:	Dummy: minority stake	163	-	-	-	-	-
Var11:	Freedom of target market	149	2,78	2,50	0,76	1,00	4,50
Var12:	GDP growth in target country	162	3,76%	4,40%	3,60%	-11,00%	10,70%
Var13:	Rule of law	162	-0,03	-0,12	0,62	-1,03	1,22
Var14:	Inflation change	162	8,93%	6,50%	12,26%	-2,70%	99,90%

Source: Own illustration; Accounting data – Fitch IBCA Bankscope; Freedom of Market – Heritage Foundation 2009; GDP growth and inflation change – United Nations Statistics Divisions; Rule of law – Kaufmann et al. (2008).

Appendix 4: Cumulative Average Abnormal Returns by Regions

Returns by regions									
Bidders	*Asia (N=6)*			*CEE (N=24)*			*LatAm (N=6)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	-0,23	-0,18	-1,89 *	-1,53	-1,21	-1,91 *	2,78	1,66	2,28 *
[-10;0]	-0,62	-0,32	-0,44	-1,13	-1,78 *	-1,32	1,47	1,57 *	1,70 *
[-5;0]	-1,09	-0,58	-0,91	-1,13	-2,22 **	-1,36	0,44	0,85	0,78
[-1;0]	-0,48	-0,66	-0,77	-0,20	-0,66	-0,60	-0,10	-0,27	-0,20
[0]	-0,64	-1,12	-1,82 *	-0,19	-0,86	-0,62	-0,02	-0,08	0,04
[-1;+1]	-0,57	-0,88	-0,90	-0,17	-0,44	-0,15	0,34	0,71	0,87
[-5;+1]	-1,18	-0,75	-1,02	-1,09	-1,90 *	-1,04	0,88	0,91	1,40
[-10;+1]	-0,71	-0,43	-0,56	-1,10	-1,73 *	-1,09	1,91	1,43 *	2,15 **
[-5;+5]	-1,87	-1,71 *	-1,49	-0,71	-1,17	-0,55	0,04	0,04	0,39
[-10;+10]	-1,30	-0,98	-0,73	-0,61	-0,62	-0,59	0,60	0,59	0,72
[-20;+20]	-0,62	-0,36	-1,58	-1,91	-1,10	-1,62	2,89	1,23	1,81 *
Targets	*Asia (N=6)*			*CEE (N=24)*			*LatAm (N=6)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	4,36	0,65	3,47 ***	6,16	1,59	2,78 ***	-2,99	-0,43	-0,07
[-10;0]	0,80	0,15	3,98 ***	7,48	3,06 ***	3,99 ***	0,53	0,10	0,74
[-5;0]	0,98	0,33	4,35 ***	4,22	2,69 **	3,19 ***	0,50	0,11	1,22
[-1;0]	1,61	0,94	4,29 ***	1,42	1,70	1,41	-0,20	-0,09	1,00
[0]	1,36	1,12	5,19 ***	0,57	0,93	0,61	0,88	0,50	2,29 **
[-1;+1]	0,70	0,18	4,19 ***	1,04	0,78	1,29	-0,99	-0,42	0,27
[-5;+1]	0,06	0,01	4,48 ***	3,84	1,93 *	3,05 ***	-0,28	-0,06	0,77
[-10;+1]	0,12	-0,02	4,15 ***	7,10	3,28 ***	3,89 ***	-0,25	-0,05	0,43
[-5;+5]	3,65	0,48	5,98 ***	2,94	1,44	1,58	6,92	1,03	2,46 **
[-10;+10]	2,24	0,22	4,57 ***	7,06	2,56 **	2,88 ***	7,07	1,34	1,69 *
[-20;+20]	6,91	0,51	3,94 ***	0,77	0,15	0,88	3,06	1,16	0,68
Combined	*Asia (N=6)*			*CEE (N=24)*			*LatAm (N=6)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	-0,85	-0,47	-0,30	-2,63	-3,05 ***	-2,34 **	2,56	1,69 *	1,26
[-10;0]	-1,22	-0,59	0,05	-1,27	-2,05 *	-1,32	1,99	2,83 **	0,69
[-5;0]	-0,91	-0,50	-0,87	-0,90	-1,75 *	-0,86	0,60	1,52	-0,02
[-1;0]	-0,56	-0,82	-0,79	0,00	0,00	-0,23	-0,12	-0,35	0,04
[0]	-0,72	-1,34	-1,36	-0,15	-0,57	-0,62	-0,13	-0,55	0,03
[-1;+1]	-0,75	-1,33	-0,24	-0,10	-0,26	-0,08	0,25	0,57	-0,06
[-5;+1]	-1,10	-0,73	-0,54	-1,00	-1,75 *	-0,73	0,97	1,22	-0,08
[-10;+1]	-1,41	-0,75	0,25	-1,37	-2,22 **	-1,21	2,36	2,32 *	1,32 *
[-5;+5]	-1,02	-0,86	-0,56	-1,05	-1,65 *	-0,77	0,43	0,48	-0,26
[-10;+10]	-1,90	-1,23	-0,07	-0,87	-0,94	-0,78	1,29	1,26	0,15
[-20;+20]	-0,63	-0,32	-0,02	-3,60	-2,92 ***	-2,32 **	2,58	1,21	1,03

Source: Own calculations; Return Index data – DataStream.

This table reports the cumulative average abnormal returns to bidders, targets, and combined entities according to target regions. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Appendix 5: Cumulative Average Abnormal Returns by Nationality of Bidders

Returns by nationality of bidder banks

Bidders	*U.S. (N=6)*			*European*[a] *(N=18)*			*Italian (N=8)*			*Spanish (N=4)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	-0,37	-0,28	-0,36	-1,74	-1,50	-1,76 *	-0,18	-0,06	-0,34	3,41	1,33	2,41 **
[-10;0]	-1,40	-0,76	-0,87	-0,87	-1,24	-0,50	-0,63	-0,48	-0,34	1,74	1,27	1,69 *
[-5;0]	-1,20	-0,65	-1,18	-0,94	-1,92 *	-0,95	-1,18	-1,01	-0,71	0,65	0,84	0,92
[-1;0]	-0,28	-0,38	-0,80	-0,47	-1,59	-1,08	0,17	0,25	0,48	0,14	0,46	0,04
[0]	-0,31	-0,52	-1,00	-0,50	-2,09 *	-1,49	0,15	0,35	0,56	0,27	1,93	0,57
[-1;+1]	-0,59	-1,32	-1,03	-0,18	-0,47	0,36	-0,18	-0,20	-0,02	0,70	1,32	1,20
[-5;+1]	-1,51	-1,01	-1,34	-0,65	-1,16	-0,07	-1,52	-1,18	-0,93	1,22	0,81	1,62
[-10;+1]	-1,71	-1,16	-1,02	-0,58	-0,78	0,14	-0,97	-0,82	-0,53	2,30	1,13	2,20 **
[-5;+5]	-2,25	-2,36 *	-1,63 *	-0,68	-1,06	-0,32	-0,27	-0,23	0,13	-0,01	-0,01	0,44
[-10;+10]	-3,87	-2,16 *	-1,71 *	-0,94	-1,04	-0,31	2,18	1,53	0,93	0,98	0,63	0,90
[-20;+20]	-2,41	-1,72	-1,03	-2,08	-1,25	-0,93	0,94	0,24	-0,31	3,02	0,81	1,74 **
Targets	*U.S. (N=6)*			*European*[a] *(N=18)*			*Italian (N=8)*			*Spanish (N=4)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	0,25	0,10	0,72	10,32	2,12 **	4,88 ***	0,42	0,08	0,79	-8,67	-1,01	-1,38
[-10;0]	0,10	0,07	1,72 *	9,96	2,99 ***	5,87 ***	3,43	0,98	1,76 *	-4,93	-1,09	-1,49
[-5;0]	0,45	0,43	2,60 ***	5,50	2,46 **	4,87 ***	3,39	1,38	1,97 **	-4,66	-1,91	-1,65 *
[-1;0]	0,88	1,43	2,18 **	2,08	1,72	3,02 ***	1,22	1,15	1,31	-2,50	-1,32	-0,99
[0]	0,47	0,75	2,88 ***	1,17	1,24	2,66 ***	0,86	1,11	1,34	-0,90	-0,79	-0,42
[-1;+1]	0,71	0,65	1,54	0,82	0,39	2,69 ***	2,22	1,69	1,59	-3,42	-1,48	-1,22
[-5;+1]	0,28	0,19	2,26 **	4,24	1,37	4,66 ***	4,38	1,94 *	2,16 **	-5,58	-1,88	-1,80 *
[-10;+1]	-0,06	-0,04	0,07	8,70	2,50 **	5,73 ***	4,43	1,33	1,95 *	-5,85	-1,37	-1,63
[-5;+5]	0,15	0,09	1,88 *	4,68	1,34	4,24 ***	3,55	1,25	1,49	5,11	0,54	0,83
[-10;+10]	-0,37	-0,16	0,97	10,72	2,42 **	5,48 ***	1,74	0,42	0,98	5,17	0,79	0,54
[-20;+20]	3,06	0,84	0,49	4,81	0,65	3,23 ***	-3,95	-0,53	0,10	1,25	0,69	0,24
Combined	*U.S. (N=6)*			*European*[a] *(N=18)*			*Italian (N=8)*			*Spanish (N=4)*		
Event window	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*	*CAAR (%)*	*t-value*	*z-score*
[-20;0]	-1,10	-0,62	-0,44	-1,86	-1,63	-1,51	-3,14	-3,58 **	-1,51	3,08	1,31	2,33 **
[-10;0]	-2,04	-1,06	-1,03	-0,74	-0,95	-0,34	-1,25	-1,39	-0,67	2,49	2,93 *	1,54
[-5;0]	-1,06	-0,59	-1,11	-0,77	-1,50	-0,09	-0,83	-0,75	-0,48	0,86	1,59	0,77
[-1;0]	-0,38	-0,53	-0,95	-0,40	-1,36	-0,52	0,64	1,16	1,11	0,08	0,39	-0,03
[0]	-0,41	-0,70	-1,13	-0,60	-2,40 **	-1,30	0,54	1,19	1,30	0,08	2,81	0,54
[-1;+1]	-0,80	-2,13 *	-1,24	-0,31	-0,72	0,39	0,36	0,51	0,60	0,55	1,15	1,11
[-5;+1]	-1,48	-1,02	-1,33	-0,68	-1,18	0,45	-1,11	-0,91	-0,64	1,33	1,10	1,46
[-10;+1]	-2,47	-1,53	-1,22	-0,66	-0,83	0,08	-1,53	-1,75	-0,79	2,96	2,08	2,04 **
[-5;+5]	-1,51	-1,28	-1,30	-0,90	-1,50	0,10	-0,71	-0,50	-0,11	0,55	0,39	0,44
[-10;+10]	-4,58	-2,67 *	-1,85 *	-0,68	-0,72	0,12	0,90	0,71	0,48	1,99	1,37	0,90
[-20;+20]	-2,57	-1,74	-0,95	-2,50	-1,57	-1,23	-3,09	-1,58	-1,41	2,57	0,76	1,77 *

Source: Own calculations; Return Index data – DataStream.

This table reports the cumulative average abnormal returns to bidders, targets, and combined entities according to nationality of bidders. Abnormal returns were calculated using OLS-regression. OLS-parameters have been estimated for a period of 120 trading days prior to the event window [-20;+20]. For the market returns of each country, respective market indices are applied. Statistical significance is tested using the standard t-test statistic and the test according to Dodd & Warner (1983).

[a] European excludes transactions involving Italian and Spanish bidders.

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Appendix 6: Characteristics of Independent Variables of Sub-Sample

Var	*Description*	*N*	*Average*	*Median*	*Std. dev.*	*Min.*	*Max.*
Var1:	Target ROE	36	5,64%	13,60%	33,87%	-121,17%	49,47%
Var2:	Target CIR	35	65,29%	65,35%	16,31%	41,50%	106,48%
Var3:	Target CA-Ratio	36	5,12%	4,59%	2,49%	1,74%	14,47%
Var4:	Relative ROE	36	0,44%	0,88%	2,54%	-10,11%	4,93%
Var5:	Relative CIR	35	1,00%	0,97%	0,27%	0,59%	1,80%
Var6:	Relative CA-Ratio	36	2,18%	1,80%	1,31%	0,62%	6,32%
Var7:	Relative asset size (logarithms)	36	0,79%	0,79%	0,06%	0,64%	0,92%
Var8:	Dummy: bidder's Cross border M&A experience	36	-	-	-	-	-
Var9:	Dummy: minority stake	36	-	-	-	-	-
Var10:	Freedom of target market	36	2,88	3,00	0,64	2,00	4,00
Var11:	GDP growth in target country	36	2,34%	3,75%	3,91%	-10,50%	7,40%
Var12:	Rule of law	36	0,35	0,47	0,46	-0,69	1,17
Var13:	Inflation change	36	8,86%	5,25%	12,89%	-0,30%	54,40%

Source: Own illustration; Accounting data – Fitch IBCA Bankscope; Freedom of Market – Heritage Foundation 2009; GDP growth and inflation change – United Nations Statistics Divisions; Rule of law – Kaufmann et al. (2008).

Appendix 7: Differences – SWF Targets vs. Private Equity Targets

	Panel I: SWF Targets Mean					*Panel II: Private Equity Targets Mean*					*Difference*				
	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	$t+1$	t_{+2}
Return on Assets	4,41	4,53	4,25	1,29	0,34	2,13	4,54	4,56	3,66	3,06	2,28	-0,01	-0,31	-2,37 *	-2,72 *
Return on Equity	16,44	11,09	-0,90	7,81	5,97	3,36	7,50	6,30	6,20	-1,25	13,08 ***	3,59	-7,19	1,60	7,22
Dividend Payout per Share	36,43	28,06	28,12	26,30	24,97	23,01	16,89	17,63	23,63	24,30	13,42 **	11,17 **	10,49 **	2,66	0,67
Dividend Yield	3,44	2,21	3,51	3,90	4,60	1,79	2,15	1,90	1,54	1,36	1,64 ***	0,06	1,61 ***	2,36 ***	3,24 ***
Earnings per Share	1,42	0,93	0,02	-0,07	-0,28	0,90	1,72	-1,58	0,63	0,38	0,52	-0,80	1,60	-0,70	-0,66
Market-to-Book-Ratio	2,28	2,19	2,22	1,82	1,98	1,93	1,75	1,68	1,66	1,55	0,35	0,44	0,54 **	0,16	0,44
Price-Earnings-Ratio	13,17	15,80	11,37	10,49	13,64	0,26	9,30	10,55	7,69	9,44	12,92 **	6,50	0,83	2,80	4,20
Costs-Assets-Ratio	0,09	0,10	0,13	0,09	0,12	0,22	0,24	0,18	0,18	0,20	-0,14 ***	-0,14 **	-0,05	-0,09 *	-0,08
Leverage	4,36	5,07	4,44	6,28	2,65	1,48	1,81	1,74	1,29	1,29	2,89 ***	3,26 ***	2,70 ***	4,99 ***	1,36 **
Total Debt/Total Assets	0,25	0,28	0,29	0,27	0,22	0,21	0,22	0,24	0,24	0,18	0,04	0,06	0,05	0,02	0,03
Equity % Total Capital	53,94	51,25	52,82	50,89	51,39	71,24	69,54	68,12	70,43	73,02	-17,30 ***	-18,29 ***	-15,30 **	-19,54 ***	-21,63 ***
Total Assets	322.604,50	369.110,61	318.371,00	374.246,19	180.057,28	11.590,20	12.894,54	11.485,87	9.628,24	6.902,92	311.014,30 ***	356.216,07 ***	306.885,13 ***	364.617,95 ***	173.154,37 ***
Market Capitalization	31.701,56	19.986,56	11.651,82	18.592,57	13.440,45	1.454,88	1.766,75	1.449,83	1.659,82	1.702,13	30.246,68 ***	18.219,81 ***	10.201,99 ***	16.932,75 ***	11.738,32 **
% Closely Held Shares	24,33	26,58	23,41	22,66	23,69	31,96	28,59	34,49	38,62	39,64	-7,63	-2,01	-11,08 *	-15,96 **	-15,95 ***

Source: Own calculations; Thomson Financial Worldscope.

This table shows the firm characteristics of SWF and private equity fund targets. Return on Assets = (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged total assets * 100; Return on Equity= (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged common equity * 100; Dividend Payout per Share is defined as Dividends per Share over Earnings per Share; Dividend Yield = Dividends per Share / Market Price-Year End * 100; Earnings per Share= Total earnings / Number of shares outstanding; Market-to-Book-Ratio = Market Price-Year End / Book Value Per Share; Price-Earnings-Ratio = Market Price-Year End / Earnings per Share; Costs-Assets-Ratio = Total operating expenses / Total Assets; Leverage = Total debt / Total common equity; Equity % Total Capital = (Common Equity / Total Capital) * 100; Total Assets is defined as the value of a company's book assets; Market Capitalization is defined as the value of a company's total shares at year end; % Closely Held Shares is a measure for insider ownership and is defined as (Number of Closely Held Shares / Common Shares Outstanding) * 100.

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Appendix 8: Differences – SWF Targets vs. Rival Portfolio

	Panel I: SWF Targets Mean					*Panel II: SWF Rivals Mean*					*Difference*				
	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	$t+1$	t_{+2}
Return on Assets	4,41	4,53	4,25	1,29	0,34	2,89	3,03	2,81	2,79	2,31	1,53 **	1,50 *	1,44	-1,50	-1,97 **
Return on Equity	16,44	11,09	-0,90	7,81	5,97	16,82	14,64	9,04	13,58	9,30	-0,38	-3,55	-9,94	-5,77	-3,33
Dividend Payout per Share	36,43	28,06	28,12	26,30	24,97	33,76	32,96	34,06	32,41	29,64	2,67	-4,90	-5,95	-6,11	-4,68
Dividend Yield	3,44	2,21	3,51	3,90	4,60	3,03	2,83	3,30	3,12	3,24	0,41	-0,62 *	0,22	0,78	1,36
Earnings per Share	1,42	0,93	0,02	-0,07	-0,28	1,28	1,05	0,73	0,68	0,61	0,14	-0,13	-0,71	-0,74 *	-0,90 ***
Market-to-Book-Ratio	2,28	2,19	2,22	1,82	1,98	2,18	2,21	1,98	1,56	1,28	0,10	-0,02	0,24	0,26	0,71 ***
Price-Earnings-Ratio	13,17	15,80	11,37	10,49	13,64	11,79	11,43	11,40	11,65	9,80	1,39	4,37 **	-0,03	-1,16	3,84 *
Costs-Assets-Ratio	0,09	0,10	0,13	0,09	0,12	0,07	0,07	0,07	0,07	0,07	0,02 **	0,03 **	0,06 ***	0,02 *	0,05 **
Leverage	4,36	5,07	4,44	6,28	2,65	3,90	4,09	3,99	3,81	3,37	0,46	0,98	0,44	2,47 **	-0,72
Total Debt/Total Assets	0,25	0,28	0,29	0,27	0,22	0,21	0,21	0,21	0,20	0,18	0,05	0,07 **	0,09 **	0,07 **	0,03
Equity % Total Capital	53,94	51,25	52,82	50,89	51,39	57,31	56,01	52,81	53,41	54,18	-3,37	-4,76	0,02	-2,52	-2,79
Total Assets	322.604,50	369.110,61	318.371,00	374.246,19	180.057,28	166.602,80	204.294,81	200.259,00	182.032,56	135.053,81	156.001,70 **	164.815,81 **	118.112,00	192.213,63 *	45.003,47
Market Capitalization	31.701,56	19.986,56	11.651,82	18.592,57	13.440,45	16.990,41	15.732,46	10.845,11	10.156,08	6.765,96	14.711,15 **	4.254,10	806,71	8.436,49 **	6.674,49 *
% Closely Held Shares	24,33	26,58	23,41	22,66	23,69	34,54	36,09	37,27	38,94	40,33	-10,20 *	-9,51 *	-13,86 ***	-16,28 ***	-16,64 ***

Source: Own calculations; Thomson Financial Worldscope.

This table shows the firm characteristics of SWF targets compared to their global industry rivals. Return on Assets = (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged total assets * 100; Return on Equity= (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged common equity * 100; Dividend Payout per Share is defined as Dividends per Share over Earnings per Share; Dividend Yield = Dividends per Share / Market Price-Year End * 100; Earnings per Share= Total earnings / Number of shares outstanding; Market-to-Book-Ratio = Market Price-Year End / Book Value Per Share; Price-Earnings-Ratio = Market Price-Year End / Earnings per Share; Costs-Assets-Ratio = Total operating expenses / Total Assets; Leverage = Total debt / Total common equity; Equity % Total Capital = (Common Equity / Total Capital) * 100; Total Assets is defined as the value of a company's book assets; Market Capitalization is defined as the value of a company's total shares at year end; % Closely Held Shares is a measure for insider ownership and is defined as (Number of Closely Held Shares / Common Shares Outstanding) * 100.

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Appendix 9: Differences – Private Equity Fund Targets vs. Rival Portfolio

	Panel I: Private Equity Fund Targets Mean					*Panel II: Private Equity Fund Rivals Mean*					*Difference*				
	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	t_{+1}	t_{+2}	t_{-2}	t_{-1}	t_0	$t+1$	t_{+2}
Return on Assets	2,13	4,54	4,56	3,66	3,06	3,66	4,04	3,59	2,98	2,46	-1,52	0,49	0,97	0,68	0,61
Return on Equity	3,36	7,50	6,30	6,20	-1,25	12,22	11,85	8,25	5,94	4,77	-8,85 ***	-4,34	-1,95	0,27	-6,02
Dividend Payout per Share	23,01	16,89	17,63	23,63	24,30	28,08	32,62	33,49	33,42	29,40	-5,07	-15,73 ***	-15,87 ***	-9,79 **	-5,10
Dividend Yield	1,79	2,15	1,90	1,54	1,36	2,05	2,24	2,35	2,55	1,97	-0,26	-0,09	-0,46	-1,01 **	-0,61 *
Earnings per Share	0,90	1,72	-1,58	0,63	0,38	2,15	2,54	3,18	2,17	2,38	-1,26 *	-0,82	-4,76 *	-1,54	-2,01
Market-to-Book-Ratio	1,93	1,75	1,68	1,66	1,55	1,99	2,02	1,99	1,62	1,55	-0,06	-0,26	-0,30	0,04	0,00
Price-Earnings-Ratio	0,26	9,30	10,55	7,69	9,44	15,59	19,23	13,86	13,03	12,48	-15,33 ***	-9,93 **	-3,31	-5,34	-3,04
Costs-Assets-Ratio	0,22	0,24	0,18	0,18	0,20	0,20	0,17	0,16	0,17	0,20	0,02	0,07	0,03	0,01	0,00
Leverage	1,48	1,81	1,74	1,29	1,29	1,44	1,46	1,46	1,40	1,17	0,04	0,35	0,28	-0,11	0,12
Total Debt/Total Assets	0,21	0,22	0,24	0,24	0,18	0,18	0,17	0,18	0,18	0,17	0,03	0,05	0,06 *	0,06 *	0,01
Equity % Total Capital	71,24	69,54	68,12	70,43	73,02	69,80	70,96	70,53	70,95	75,87	1,44	-1,42	-2,41	-0,52	-2,85
Total Assets	11.590,20	12.894,54	11.485,87	9.628,24	6.902,92	9.175,99	10.793,11	13.648,01	14.752,83	7.477,31	2.414,21	2.101,43	-2.162,14	-5.124,58	-574,39
Market Capitalization	1.454,88	1.766,75	1.449,83	1.659,82	1.702,13	1.477,72	1.756,88	1.380,85	1.436,58	1.019,05	-22,84	9,87	68,98	223,23	683,08 *
% Closely Held Shares	31,96	28,59	34,49	38,62	39,64	38,38	38,80	40,38	41,85	49,18	-6,42	-10,20 **	-5,89	-3,23	-9,54 *

Source: Own calculations; Thomson Financial Worldscope.

This table shows the firm characteristics of private equity fund targets compared to their global industry rivals. . Return on Assets = (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged total assets * 100; Return on Equity= (net income before preferred dividends + ((interest expense on debt-interest capitalized) * (1-tax rate))) / last lagged common equity * 100; Dividend Payout per Share is defined as Dividends per Share over Earnings per Share; Dividend Yield = Dividends per Share / Market Price-Year End * 100; Earnings per Share= Total earnings / Number of shares outstanding; Market-to-Book-Ratio = Market Price-Year End / Book Value Per Share; Price-Earnings-Ratio = Market Price-Year End / Earnings per Share; Costs-Assets-Ratio = Total operating expenses / Total Assets; Leverage = Total debt / Total common equity; Equity % Total Capital = (Common Equity / Total Capital) * 100; Total Assets is defined as the value of a company's book assets; Market Capitalization is defined as the value of a company's total shares at year end; % Closely Held Shares is a measure for insider ownership and is defined as (Number of Closely Held Shares / Common Shares Outstanding) * 100.

***, **, * denote statistical significance at 1%, 5%, and 10% level, respectively.

Appendix 10: Balance Sheet Positions of US Universal Banks, 2005-2008

	Balance sheet positions in USD bn				*Annual changes in %*		
Overview Banks	*2005*	*2006*	*2007*	*2008*	*Δ 05/06*	*Δ 06/07*	*Δ 07/08*
Bank of America							
Total Assets	1291,80	1459,74	1715,75	1817,94	13,00	17,54	5,96
Total Equity	101,26	132,42	142,39	139,35	30,77	7,53	-2,14
Total Customer Loans	573,79	706,49	910,77	962,90	23,13	28,91	5,72
Loan Loss Provision	4,01	5,01	8,39	26,83	24,81	67,37	219,92
Capital One Financial							
Total Assets	88,70	149,74	150,59	165,91	68,81	0,57	10,18
Total Equity	14,13	25,24	24,29	23,52	78,61	-3,73	-3,20
Total Customer Loans	59,85	106,95	102,12	101,09	78,70	-4,51	-1,01
Loan Loss Provision	1,49	1,48	2,64	5,10	-0,98	78,57	93,48
Citigroup							
Total Assets	1494,04	1884,32	2187,63	1938,47	26,12	16,10	-11,39
Total Equity	111,41	118,78	113,60	73,36	6,62	-4,37	-35,42
Total Customer Loans	583,50	679,19	777,99	694,22	16,40	14,55	-10,77
Loan Loss Provision	7,93	6,74	17,42	33,67	-15,02	158,59	93,26
Fifth Third Bancorp							
Total Assets	105,23	100,67	110,96	119,76	-4,33	10,22	7,93
Total Equity	9,44	10,01	9,15	7,84	6,10	-8,60	-14,38
Total Customer Loans	71,23	75,50	84,58	85,60	6,00	12,02	1,20
Loan Loss Provision	0,33	0,34	0,63	4,56	3,94	83,09	626,11
JPMorgan Chase							
Total Assets	1198,94	1351,52	1562,15	2175,05	12,73	15,58	39,23
Total Equity	107,07	115,79	123,22	134,95	8,14	6,42	9,51
Total Customer Loans	419,15	483,13	519,37	744,90	15,26	7,50	43,42
Loan Loss Provision	3,48	3,27	6,86	20,98	-6,12	109,91	205,64
PNC Financial Services							
Total Assets	91,95	101,82	138,92	291,08	10,73	36,44	109,53
Total Equity	9,15	11,67	16,51	19,73	27,53	41,42	19,52
Total Customer Loans	51,55	52,47	72,25	179,86	1,79	37,69	148,95
Loan Loss Provision	0,02	0,12	0,32	1,52	490,48	154,03	381,59
SunTrust Banks							
Total Assets	179,71	182,16	179,57	189,14	1,36	-1,42	5,33
Total Equity	16,89	17,31	17,55	17,17	2,52	1,38	-2,20
Total Customer Loans	128,25	133,24	131,17	131,03	3,89	-1,56	-0,11
Loan Loss Provision	0,18	0,26	0,66	2,47	48,39	153,30	272,12
Wells Fargo							
Total Assets	481,74	482,00	575,44	1309,64	0,05	19,39	127,59
Total Equity	40,68	45,90	47,66	71,54	12,83	3,83	50,10
Total Customer Loans	351,98	352,93	409,96	891,15	0,27	16,16	117,37
Loan Loss Provision	2,38	2,20	4,94	15,98	-7,51	124,09	223,53

Source: Own illustration; Fitch IBCA Bankscope.

Appendix 11: Profit/Loss statement Positions of US Universal Banks, 2005-2008

		Profit/Loss statement positions in USD bn				*Annual changes in %*		
Overview Banks		*2005*	*2006*	*2007*	*2008*	*Δ 05/06*	*Δ 06/07*	*Δ 07/08*
Bank of America	Net Interest Revenue	30,72	34,57	34,25	44,09	12,53	-0,92	28,72
	Net Trading Income	1,81	3,17	-5,13	-5,91	74,72	-262,07	15,20
	Other operating Income	24,63	34,82	37,02	33,33	41,41	6,30	-9,95
	Total operating expense	32,28	39,80	44,99	67,42	23,29	13,02	49,87
	Write-downs/credit losses	n.a.	n.a.	9,70	33,00	-	-	240,21
	Profit/Loss	16,47	21,13	14,98	4,01	28,35	-29,11	-73,25
Capital One Financial[a]	Net Interest Revenue	3,68	5,10	6,53	7,15	38,57	28,05	9,48
	Net Trading Income	n.a.	n.a.	n.a.	n.a.	-	-	-
	Other operating Income	6,36	7,00	8,05	6,74	10,04	15,11	-16,27
	Total operating expense	7,21	8,44	10,58	12,37	17,12	25,26	16,92
	Write-downs/credit Losses	n.a.	n.a.	n.a.	n.a.	-	-	-
	Profit/Loss	1,81	2,41	1,57	-0,05	33,46	-34,96	-102,93
Citigroup	Net Interest Revenue	39,17	39,42	46,89	52,18	0,64	18,94	11,28
	Net Trading Income	n.a.	n.a.	-12,08	-22,19	-	-	83,69
	Other operating Income	44,40	50,13	45,91	19,89	12,89	-8,42	-56,68
	Total operating expense	54,21	59,98	78,91	104,81	10,64	31,57	32,82
	Write-downs/credit losses	n.a.	n.a.	23,80	64,30	-	-	170,17
	Profit/Loss	24,59	21,54	3,62	-27,68	-12,41	-83,21	-865,39
Fifth Third Bancor	Net Interest Revenue	2,96	2,87	3,01	3,45	-3,10	4,74	14,59
	Net Trading Income	n.a.	n.a.	n.a.	n.a.	-	-	-
	Other operating Income	2,50	2,15	2,47	2,95	-13,88	14,58	19,42
	Total operating expense	3,26	3,40	3,94	9,12	4,36	15,89	131,63
	Write-downs/credit losses	n.a.	n.a.	0,80	4,10	-	-	412,50
	Profit/Loss	1,55	1,19	1,10	-2,11	-23,31	-7,58	-292,53
JPMorgan Chase	Net Interest Revenue	19,82	21,24	26,41	38,11	7,19	24,31	44,30
	Net Trading Income	5,86	10,35	9,02	-10,70	76,55	-12,86	-218,68
	Other operating Income	28,84	29,85	35,95	39,17	3,49	20,44	8,96
	Total operating expense	39,03	41,25	48,36	64,05	5,67	17,24	32,44
	Write-downs/credit losses	n.a.	n.a.	5,80	27,80	-	-	379,31
	Profit/Loss	8,48	14,44	15,37	5,61	70,27	6,38	-63,52
PNC Financial Services	Net Interest Revenue	2,15	2,24	2,92	3,80	4,23	29,90	30,43
	Net Trading Income	0,16	0,18	0,10	0,00	16,56	-43,17	-100,00
	Other operating Income	4,01	4,08	3,81	3,37	1,82	-6,50	-11,70
	Total operating expense	4,35	4,57	4,61	5,95	4,89	0,96	28,97
	Write-downs/credit losses	n.a.	n.a.	0,20	7,10	-	-	3450,00
	Profit/Loss	1,33	2,60	1,47	0,88	95,85	-43,47	-39,88
Sun Trust Banks	Net Interest Revenue	4,58	4,65	4,69	4,57	1,61	0,78	-2,52
	Net Trading Income	0,15	0,11	-0,36	0,04	-22,12	-420,09	-110,56
	Other operating Income	3,01	3,36	3,79	4,44	11,48	12,96	17,01
	Total operating expense	4,87	5,14	5,90	8,36	5,65	14,71	41,80
	Write-downs/credit losses	n.a.	n.a.	0,90	5,20	-	-	477,78
	Profit/Loss	1,99	2,12	1,63	0,80	6,55	-22,83	-51,30
Wells Fargo	Net Interest Revenue	18,50	19,95	20,97	24,86	7,82	5,13	18,51
	Net Trading Income	0,57	0,54	0,54	0,28	-4,73	0,00	-49,45
	Other operating Income	13,87	15,20	17,87	16,48	9,53	17,61	-7,79
	Total operating expense	21,40	22,95	27,76	38,64	7,22	20,99	39,18
	Write-downs/credit losses	n.a.	n.a.	2,60	20,80	-	-	700,00
	Profit/Loss	7,67	8,48	8,06	2,65	10,57	-5,01	-67,05

Source: Own illustration; Fitch IBCA Bankscope; Bloomberg.

[a] Write-downs/credit losses are less than USD 1.0 bn; therefore not detected by Bloomberg's database.

Appendix 12: Performance Indicators of US Universal Banks, 2005-2008

Overview performance indicators	*U.S. Universal Banks*															
	Bank of America		*Capital One Financial*		*Cititgroup*		*Fifth Third bankcorp*		*JP Morgan Chase*		*PNC Financial Services*		*SunTrust Banks*		*Wells Fargo*	
Return on average assets (ROAA) in																
2005	1,37	-	2,54	-	1,65	-	1,55	-	0,72	-	1,54	-	1,17	-	1,69	-
2006	1,53	*12*	2,03	*-20*	1,27	*-23*	1,15	*-26*	1,13	*58*	2,68	*74*	1,17	*-1*	1,76	*4*
2007	0,93	*-39*	1,05	*-48*	0,18	*-86*	1,02	*-12*	1,06	*-7*	1,22	*-54*	0,89	*-24*	1,52	*-13*
2008	0,16	*-83*	-0,03	*-103*	-1,63	*-1031*	-1,89	*-286*	0,26	*-75*	0,40	*-67*	0,41	*-54*	0,25	*-84*
Return on average equity (ROAE) in %																
2005	16,40	-	16,07	-	22,34	-	16,87	-	7,98	-	15,46	-	12,09	-	19,53	-
2006	18,07	*10*	12,27	*-24*	18,66	*-16*	12,21	*-28*	12,96	*63*	24,91	*61*	12,34	*2*	19,59	*0*
2007	10,77	*-40*	6,34	*-48*	3,07	*-84*	11,22	*-8*	12,86	*-1*	10,41	*-58*	9,20	*-25*	17,22	*-12*
2008	1,94	*-82*	-0,19	*-103*	-35,95	*-1270*	-25,67	*-329*	3,82	*-70*	4,75	*-54*	4,30	*-53*	3,98	*-77*
Tier 1 Capital Ratio in %																
2005	8,30	-	13,25	-	8,80	-	8,40	-	8,50	-	8,30	-	7,00	-	8,30	-
2006	8,60	*4*	10,22	*-23*	8,60	*-2*	8,40	*0*	8,70	*2*	10,40	*25*	7,70	*10*	9,00	*8*
2007	6,90	*-20*	10,13	*-1*	7,10	*-17*	7,70	*-8*	8,40	*-3*	6,80	*-35*	6,90	*-10*	7,60	*-16*
2008	9,20	*33*	13,76	*36*	11,90	*68*	10,60	*38*	10,90	*30*	9,70	*43*	10,90	*58*	7,80	*3*
Cost-to-income ratio (CIR) in %																
2005	49,46	-	56,96	-	55,38	-	53,57	-	65,20	-	68,61	-	60,65	-	57,72	-
2006	47,95	*-3*	57,60	*1*	59,45	*7*	60,82	*14*	61,81	*-5*	68,30	*0*	60,09	*-1*	58,12	*1*
2007	55,34	*15*	54,44	*-5*	76,18	*28*	60,48	*-1*	58,14	*-6*	62,88	*-8*	64,47	*7*	57,94	*0*
2008	56,77	*3*	52,29	*-4*	142,62	*87*	71,39	*18*	64,69	*11*	61,79	*-2*	65,13	*1*	54,46	*-6*

Source: Own illustration; Fitch IBCA Bankscope.

Note: Italicized figures represent annual changes in %.

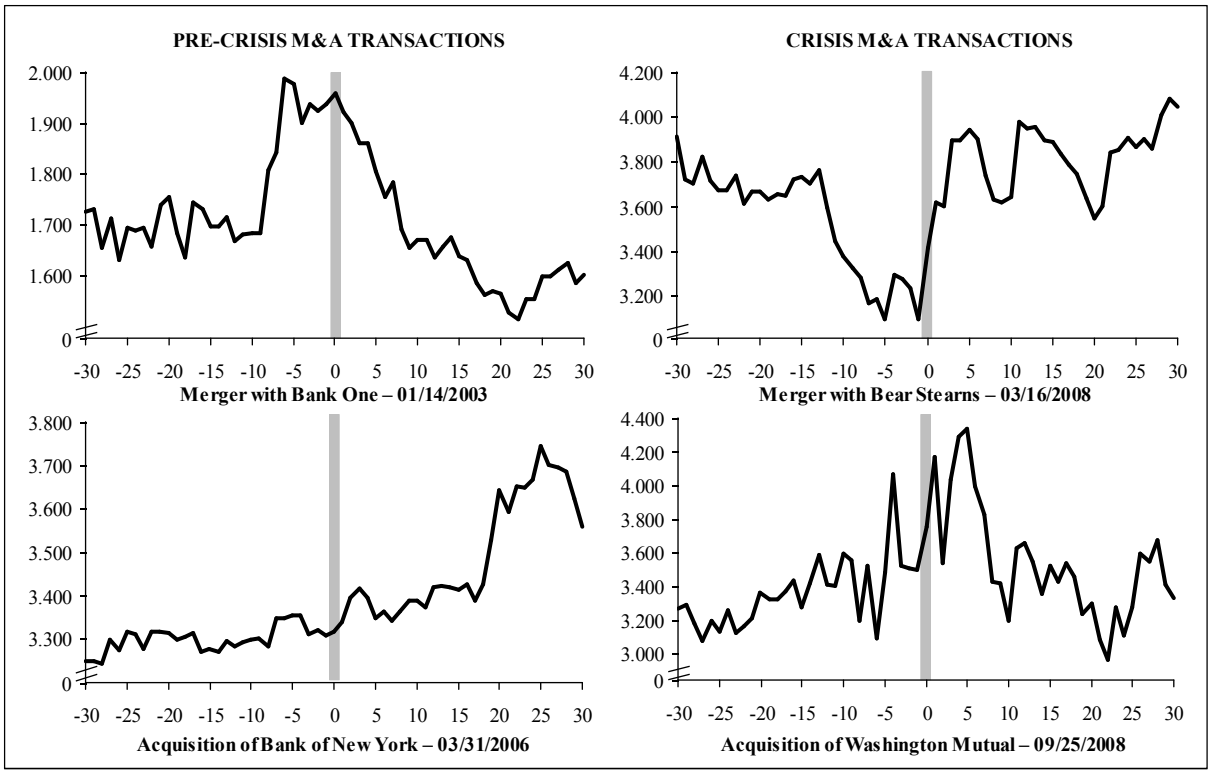
Appendix 13: Overview of identified Transactions of. US Universal Banks

#	Year	Target	Target country	Bidder	% acquired	% after deal	Tx.-Vol. in USD m
1	2003	Lighthouse Financial Savings	U.S.	SunTrust Banks Inc	100,0	100,0	130,0
2	2003	Citizens Financial Group	U.S.	JPMorgan Chase & Co	100,0	100,0	-
3	2003	Pacific Northwest Bancorp	U.S.	Wells Fargo	100,0	100,0	622,4
4	2003	Sun America Mortgage	U.S.	SunTrust Banks Inc	100,0	100,0	-
5	2003	Ceska Sporitelna	CZ	JPMorgan Chase & Co	100,0	100,0	435,0
6	2003	Sears Roebuck & Co	U.S.	Citigroup Inc	100,0	100,0	7.100,0
7	2003	Bank One Corp	U.S.	JPMorgan Chase & Co	100,0	100,0	720,0
8	2003	United National Bancorp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	637,9
9	2003	FleetBoston Financial Corp	U.S.	Bank of America Corp	100,0	100,0	49.260,6
10	2003	Forum Financial Group	U.S.	Citigroup Inc	100,0	100,0	-
11	2004	Bank One Corp	U.S.	JPMorgan Chase & Co	100,0	100,0	58.760,6
12	2004	Koram Bank	ROK	Citigroup Inc	60,9	97,5	1.637,4
13	2004	Seix Investment Advisors Inc	U.S.	SunTrust Banks Inc	100,0	100,0	280,0
14	2004	Natl Commerce Finl Corp	U.S.	SunTrust Banks Inc	100,0	100,0	7.025,1
15	2004	Principal Residential Mortgage Inc	U.S.	Citigroup Inc	100,0	100,0	1.260,0
16	2004	Strong Financial	U.S.	Wells Fargo	100,0	100,0	-
17	2004	Riggs National Corp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	670,2
18	2004	Tranaut Fund Administration	U.S.	JPMorgan Chase & Co	100,0	100,0	-
19	2004	First National Bankshares	U.S.	Fifth Third Bancorp	100,0	100,0	1.635,4
20	2004	Knight Trading Group	U.S.	Citigroup Inc	100,0	100,0	237,0
21	2004	First American Bank	U.S.	Citigroup Inc	100,0	100,0	-
22	2004	First Cmnty Capital Corp	U.S.	Wells Fargo	100,0	100,0	123,7
23	2004	Onyx Acceptance Corp	U.S.	Capital One Financial Corp	100,0	100,0	198,9
24	2004	ABN-AMRO-Custody Business	NL	Citigroup Inc	100,0	100,0	-
25	2004	Hfs Group	U.K.	Capital One Financial Corp	100,0	100,0	117,0
26	2005	Hibernia Corp	U.S.	Capital One Financial Corp	100,0	100,0	4.861,7
27	2005	KeyCorp	U.S.	Bank of America Corp	100,0	100,0	-
28	2005	Federated&May - Credit Card	U.S.	Citigroup Inc	100,0	100,0	1.221,0
29	2005	MBNA Corp	U.S.	Bank of America Corp	100,0	100,0	35.810,3
30	2005	Wüstenrot Hypothekenbank	GER	Citigroup Inc	100,0	100,0	-
31	2005	Harris Williams & Co	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	-
32	2005	Works-Card Tech	U.S.	Bank of America Corp	100,0	100,0	-
33	2005	Collegiate Funding Svcs LLC	U.S.	JPMorgan Chase & Co	100,0	100,0	687,8
34	2006	Financial Labs LLC	U.S.	Bank of America Corp	100,0	100,0	-
35	2006	Kohls Corp	U.S.	JPMorgan Chase & Co	100,0	100,0	112,0
36	2006	North Fork Bancorp	U.S.	Capital One Financial Corp	100,0	100,0	15.132,9
37	2006	Bank of NY	U.S.	JPMorgan Chase & Co	100,0	100,0	3.000,0
38	2006	Washinton Mutual Inc-Mortgage	U.S.	Wells Fargo	100,0	100,0	-
39	2006	TD Ameritrade	U.S.	Citigroup Inc	100,0	100,0	-
40	2006	Mercantile Bankshares Corp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	5.981,8
41	2006	Grupo Financiero Uno	SV	Citigroup Inc	100,0	100,0	-
42	2006	US Trust Corp	U.S.	Bank of America Corp	100,0	100,0	3.300,0
43	2006	EFC Partners LP	U.S.	Wells Fargo	100,0	100,0	-
44	2006	Grupo Cuscatlan	SV	Citigroup Inc	100,0	100,0	1.510,0
45	2006	Quilter Holdings Ltd	U.K.	Citigroup Inc	100,0	100,0	-
46	2006	ABN AMRO Mortgage Group Inc	U.S.	Citigroup Inc	100,0	100,0	-
47	2007	Placer Sierra Bancshares	U.S.	Wells Fargo	100,0	100,0	627,8
48	2007	Egg PLC	U.K.	Citigroup Inc	100,0	100,0	1.091,3
49	2007	Bank of Overseas Chinese	TW	Citigroup Inc	100,0	100,0	426,5
50	2007	ACC Capital Holding	U.S.	Citigroup Inc	100,0	100,0	-

#	Year	Target	Target country	Bidder	% acquired	% after deal	Tx.-Vol. in USD m
51	2007	ABN AMRO	U.S.	Bank of America Corp	100,0	100,0	21.000,0
52	2007	Reverse Mortgage of America	U.S.	Bank of America Corp	100,0	100,0	-
53	2007	Greater Bay Bancorp	U.S.	Wells Fargo	100,0	100,0	1.656,9
54	2007	ARCS Commercial Mtg Co LP	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	-
55	2007	R-G Crown Bank	U.S.	Fifth Third Bancorp	100,0	100,0	338,0
56	2007	Yardville National Bancorp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	400,4
57	2007	Pacific Capital	U.S.	Wells Fargo	100,0	100,0	222,0
58	2007	Automated Trading Desk LLC	U.S.	Citigroup Inc	100,0	100,0	675,5
59	2007	Sterling Financial Corp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	561,8
60	2007	First Charter Corp	U.S.	Fifth Third Bancorp	100,0	100,0	1.090,9
61	2007	Opus Menhul Degerler	TR	Citigroup Inc	100,0	100,0	-
62	2007	First Horizon National	U.S.	Fifth Third Bancorp	100,0	100,0	-
63	2007	GB&T Bancshares Inc	U.S.	SunTrust Banks Inc	100,0	100,0	154,7
64	2008	Countrywide Financial Corp	U.S.	Bank of America Corp	100,0	100,0	4.143,9
65	2008	Bear Stearns Cos Inc	U.S.	JPMorgan Chase & Co	100,0	100,0	1.180,9
66	2008	Flatiron Credit Co Inc	U.S.	Wells Fargo	100,0	100,0	-
67	2008	Intra SA Corretora de Cambio	BR	Citigroup Inc	100,0	100,0	-
68	2008	Merrill Lynch & Co Inc	U.S.	Bank of America Corp	100,0	100,0	48.766,2
69	2008	Washington Mutual	U.S.	JPMorgan Chase & Co	100,0	100,0	1.900,0
70	2008	Wachovia Corp	U.S.	Wells Fargo	100,0	100,0	15.112,0
71	2008	National City Corp	U.S.	PNC Finl Svcs Grp Inc	100,0	100,0	5.617,7
72	2008	Chevy Chase Bank	U.S.	Capital One Financial Corp	100,0	100,0	520,0

Source: Own illustration; Thomson Financial SDC.
Note: Transactions 1 to 57 are pre-crisis deals and transactions 58 to 72 are crisis deals. Transactions highlighted in grey symbolize deals involving troubled target banks.
Legend: BR = Brazil, CZ = Czech Republic, GER = Germany, NL = The Netherlands, ROK = South Korea, SV = El Salvador, UK = United Kingdom, US = United States, TR = Turkey, TW = Taiwan

Appendix 14: Short-term RI Development of JPM for selected Transactions in USD



Source: Own illustration; Return Index data – Thomson Financial DataStream.
Note: Daily data display 30 days before and after the transaction announcement.

Appendix 15: US Universal Banks' Performance according to Return Index

	Return Index in USD									
Overview Banks	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*04/2009*	*CAGR Total*	*CAGR Pre-Crisis*[a]	*CAGR Crisis*[b]
Bank of America	2.734,7 *100,0*	3.214,9 *117,6*	3.524,5 *128,9*	4.066,5 *148,7*	4.236,0 *154,9*	2.781,4 *101,7*	697,4 *25,5*	-19,4%	10,9%	-62,1%
Capital One Financial	921,7 *100,0*	1.409,2 *152,9*	1.545,0 *167,6*	1.597,9 *173,4*	1.389,1 *150,7*	867,6 *94,1*	341,0 *37,0*	-14,5%	11,9%	-50,7%
Citigroup	3.221,1 *100,0*	3.734,7 *115,9*	3.833,5 *119,0*	4.189,8 *130,1*	4.254,2 *132,1*	1.777,6 *55,2*	318,6 *9,9*	-30,6%	8,7%	-74,2%
Fifth Third Bancorp	48.833,1 *100,0*	47.113,2 *96,5*	38.877,3 *79,6*	37.329,2 *76,4*	36.887,2 *75,5*	17.480,2 *35,8*	3.570,5 *7,3*	-33,8%	-4,3%	-70,6%
PNC Financial Services	5.224,5 *100,0*	6.142,8 *117,6*	6.605,1 *126,4*	8.454,3 *161,8*	9.008,9 *172,4*	8.260,2 *158,1*	4.501,2 *86,2*	-2,3%	13,3%	-30,8%
SunTrust Banks	1.076,8 *100,0*	1.258,0 *116,8*	1.355,0 *125,8*	1.485,5 *138,0*	1.599,6 *148,6*	980,4 *91,0*	310,8 *28,9*	-17,8%	10,5%	-57,8%
Wells Fargo	6.453,7 *100,0*	7.717,6 *119,6*	8.254,5 *127,9*	9.580,0 *148,4*	10.076,3 *156,1*	8.850,8 *137,1*	5.349,6 *82,9*	-2,9%	10,7%	-28,7%
All Rival Banks	9.780,8 *100,0*	10.084,3 *103,1*	9.142,1 *93,5*	9.529,0 *97,4*	9.635,9 *98,5*	5.856,9 *59,9*	2.155,6 *22,0*	-21,2%	1,0%	-54,2%
JPMorgan Chase	2.258,5 *100,0*	2.900,9 *128,4*	2.806,3 *124,3*	3.538,3 *156,7*	3.958,8 *175,3*	3.412,8 *151,1*	2.294,4 *101,6*	0,2%	14,3%	-24,0%

Source: Own illustration; Return Index data – Thomson Financial DataStream.
Note: Annual average data; Italic numbers demonstrate index values of the Return Index of respective banks. The base year value is 100 starting in 2003.
[a] Pre-crisis CAGR describes the period of the latest merger wave, which persisted from the beginning of 2003 to June 2007.
[b] Crisis CAGR describes the period starting in July 2007 with the declaration of Bear Stearns that two of their hedge funds are worthless (Creswell and Bajaj (2007)) till today (April 2009).

Appendix 16: US Universal Banks' Performance according to Market Value

Overview Banks	*Market Value in USD*									
	2003	*2004*	*2005*	*2006*	*2007*	*2008*	*04/2009*	*CAGR Total*	*CAGR Pre-Crisis*[a]	*CAGR Crisis*[b]
Bank of America	112.860,2 *100,0*	161.963,6 *143,5*	180.935,1 *160,3*	221.020,7 *195,8*	220.674,4 *195,5*	139.346,7 *123,5*	46.904,4 *41,6*	-12,9%	17,1%	-56,0%
Capital One Financial	10.686,7 *100,0*	17.206,3 *161,0*	20.423,4 *191,1*	24.538,4 *229,6*	28.542,7 *267,1*	16.487,3 *154,3*	6.454,6 *60,4*	-7,7%	26,4%	-53,7%
Citigroup	215.893,6 *100,0*	243.819,8 *112,9*	240.520,0 *111,4*	242.781,0 *112,5*	236.648,1 *109,6*	99.830,5 *46,2*	18.125,5 *8,4*	-32,4%	4,4%	-73,8%
Fifth Third Bancorp	31.898,6 *100,0*	29.653,7 *93,0*	23.468,7 *73,6*	21.651,4 *67,9*	20.161,2 *63,2*	9.080,3 *28,5*	1.899,7 *6,0*	-35,9%	-7,5%	-70,6%
PNC Financial Services	13.418,1 *100,0*	15.253,6 *113,7*	16.089,7 *119,9*	20.449,7 *152,4*	23.955,5 *178,5*	21.779,7 *162,3*	14.613,5 *108,9*	1,4%	13,9%	-23,3%
SunTrust Banks	17.124,8 *100,0*	21.008,9 *122,7*	26.165,6 *152,8*	27.759,7 *162,1*	28.265,0 *165,1*	16.486,1 *96,3*	5.066,1 *29,6*	-17,5%	13,5%	-59,2%
Wells Fargo	85.107,3 *100,0*	99.044,3 *116,4*	102.319,0 *120,2*	114.451,5 *134,5*	116.697,2 *137,1*	97.073,6 *114,1*	70.024,1 *82,3*	-3,0%	7,8%	-23,4%
All Rival Banks	69.569,9 *100,0*	83.992,9 *120,7*	87.131,6 *125,2*	96.093,2 *138,1*	96.420,6 *138,6*	57.154,9 *82,2*	23.298,3 *33,5*	-15,9%	9,0%	-52,2%
JPMorgan Chase	63.209,0 *100,0*	108.765,2 *172,1*	127.238,3 *201,3*	152.684,5 *241,6*	163.221,3 *258,2*	139.402,7 *220,5*	97.733,7 *154,6*	7,1%	25,1%	-21,8%

Source: Own illustration; Return Index data – Thomson Financial DataStream.
Note: Annual average data; Italic numbers demonstrate index values of the Return Index of respective banks. The base year value is 100 starting in 2003.
[a] Pre-crisis CAGR describes the period of the latest merger wave, which persisted from the beginning of 2003 to June 2007.
[b] Crisis CAGR describes the period starting in July 2007 with the declaration of Bear Stearns that two of their hedge funds are worthless (Creswell and Bajaj (2007)) till today (April 2009).

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